

State of California
The Resources Agency

DEPARTMENT OF WATER RESOURCES
Division of Operations and Maintenance

STATE WATER PROJECT OPERATIONS DATA

For the month of:
November 1999

Gray Davis
Governor
State of California

Mary D. Nichols
Secretary for Resources
The Resources Agency

Thomas M. Hannigan
Director
Department of Water Resource

State of California
Resources Agency

**Department of Water Resources
Division of Operations and Maintenance**

**State Water Project
Operations Data**

for the Month of November 1999

Table of Contents

Monthly Highlights

Oroville Field Division Water Operations

Table

- 1 Antelope Lake, Daily Operation
- 2 Frenchman Lake, Daily Operation
- 3 Lake Davis, Daily Operation
- 4 Lake Oroville, Daily Operation
- 5 Thermalito Forebay, Including Diversion Pool and Power Canal, Daily Operation
- 6 Thermalito Afterbay, Daily Operation
- 7 Oroville-Thermalito Complex, Water Temperature Data

Delta Field Division Water Operations

Table

- 8 Aqueduct Operation, Delta Field Division
- 9 Delta Field Division Plant Data
- 10 Clifton Court Forebay, Daily Operation of Gates
- 11 Governor Edmund G. Brown California Aqueduct, Delta Field Division, Monthly Deliveries
- 12 South Bay Aqueduct, Delta Field Division, Monthly Deliveries
- 13 Lake Del Valle, Daily Operation

San Luis Field Division Water Operations

Table

- 14 Consolidated State-Federal O'Neill Forebay, Daily Operations
- 15 Consolidated State-Federal San Luis Reservoir, Daily Operations
- 16 San Luis Field Division Plant Data
- 17 Consolidated State-Federal Los Banos Reservoir, Daily Operations
- 18 Consolidated State-Federal Little Panoche Reservoir, Daily Operations
- 19a Governor Edmund G. Brown California Aqueduct, San Luis Field Division, Monthly Deliveries
- 19b Governor Edmund G. Brown California Aqueduct, San Luis Field Division, Monthly Deliveries
- 20 Consolidated State-Federal San Luis Canal, Daily Operations

San Joaquin Field Division Water Operations

Table

- 21 San Joaquin Field Division Plant Data
- 22a Governor Edmund G. Brown California Aqueduct, San Joaquin Field Division, Monthly Deliveries
- 22b Governor Edmund G. Brown California Aqueduct, San Joaquin Field Division, Monthly Deliveries
- 22c Governor Edmund G. Brown California Aqueduct, San Joaquin Field Division, Monthly Deliveries
- 23 Coastal Branch Aqueduct, San Joaquin Field Division, Monthly Deliveries

Southern Field Division Water Operations

Table

- 24 Southern Field Division Plant Data
- 25 Pyramid Lake, Daily Operation
- 26 Elderberry Forebay, Daily Operation
- 27 Castaic Lake, Daily Operation
- 28 Governor Edmund G. Brown California Aqueduct, Southern Field Division, Monthly Deliveries (West Branch)
- 29 Silverwood Lake, Daily Operation
- 30 Lake Perris, Daily Operation
- 31a Governor Edmund G. Brown California Aqueduct, Southern Field Division, Monthly Deliveries (East Branch)
- 31b Governor Edmund G. Brown California Aqueduct, Southern Field Division, Monthly Deliveries (East Branch)

Water Quality Operations

Table

- 32 Water Quality at Selected SWP Locations
- 33 Water Quality at Selected Delta Stations
- 34 Pesticides, Herbicides, and Other Organic Substances Detected in the SWP

Energy Operations

Table

- 35 Oroville and Delta Field Divisions Energy Data
- 36 San Luis Field Division Energy Data
- 37 San Joaquin Field Division Pumping Plant Energy Load Data
- 38 Southern Field Division Energy Data

MONTHLY HIGHLIGHTS

The following highlights are activities or actions that impacted State Water Project operations during the month of November 1999.

November is typically the first of our wet months. Last year the month was wet with double normal precipitation in the northern Sierra. This year, the precipitation was near average in the north due to a series of typical fall storms sweeping through the region separated by gaps of good weather. Northern Sierra precipitation was 90 percent of average in October. With a near average amount in November, the seasonal total since October 1 is also near average. Southern California remained quite dry during November. The dryness in the south lowered the statewide seasonal precipitation average to about 70 percent.

Runoff during November was much less than average and continued a wetter-north drier-south pattern which we saw last year. Seasonal runoff statewide appears to be about 70 percent of average on December 1 compared to 120 percent a year ago. Reservoir storage statewide did not change much during November but is still excellent, being a little over 115 percent statewide. It is 15 to 20 percent less than last year's storage which was enhanced by carryover from a very wet 1998 season.

All Central Valley flood control reservoirs are essentially at or below their allowable water levels for this time of year. Some major reservoirs, such as Oroville, Millerton, and Pine Flat, are considerably below their flood control thresholds.

On November 30, total storage in major SWP reservoirs was about 3.58 MAF, compared with 4.57 MAF at this time in 1998. Average storage on November 30 is about 3.43 MAF. Storage in Lake Oroville was about 2.3 MAF, compared to 2.7 MAF at this time last year. The State's share of San Luis Reservoir storage was about 683 TAF as compared with 1.06 MAF at this time last year. On November 30, the combined storage in our southern reservoirs was about 618 TAF, compared with 646 TAF at this time last year. Through November, SWP water deliveries for 1999 were 2.7 MAF, representing a combination of project, transfer, and exchange waters. This is 985 TAF more than delivered during the same period in 1998.

On November 9, excess conditions were declared in the Delta. This declaration was made by mutual agreement with the Bureau when it was evident that runoff being produced by continuing storm events was more than needed to meet Sacramento Valley uses and project exports.

On November 1, emergency seepage repairs were initiated in Pool 49 and subsequently on November 7 in Pool 54. Pool 49 was repaired and returned to service on November 12. Pool 54 was repaired and returned to service on November 20. During the planned outage, uninterrupted deliveries were made from Southern reservoirs and pool storage.

November operations studies projected that State share of San Luis Reservoir would fill in early January under average hydrologic conditions and by late January in dry conditions. The delay in projected fill from last month's studies is a result of extremely high October demands brought about by unseasonably warm temperatures in Southern California.

On November 24, the Data Assessment Team discussed possible closure of the Delta Cross Channel gates because the CALFED Ops Group had developed criteria for closing the gates to protect out-migrating spring-run chinook yearlings. During the DAT discussion, it was concluded that the criteria had not been met and, therefore, no action was recommended. However, on November 26, Department of Fish and Game staff contacted the U.S. Bureau of Reclamation to recommend closing the DCC gates because juvenile salmon were detected moving from the Sacramento River into the Delta. As predicted by operations staff, interior Delta water quality began to degrade as a result of the closure; however, operations staff concluded there shouldn't be a problem meeting the water quality standards because an export curtailment was planned to begin on December 1. The reduction in exports would result in additional outflow, thus improving water quality.

Table 1. Antelope Lake

Daily Operation
(in acre-feet except as noted)

Capacity: 22,566 ac-ft

November 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow 1/	
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/	Total Outflow 1/		
				Stream-flow Maint.	Water Supply Contract	Water Right					
Oct 31	4995.90	17,292									
1	4995.85	17,252	-40	20	0	0	0				
2	4995.81	17,221	-31	20	0	0	0				
3	4995.75	17,173	-48	20	0	0	0				
4	4995.70	17,133	-40	20	0	0	0				
5	4995.66	17,102	-31	20	0	0	0				
6	4995.60	17,054	-48	20	0	0	0				
7	4995.59	17,046	-8	20	0	0	0				
8	4995.52	16,991	-55	20	0	0	0				
9	4995.48	16,959	-32	20	0	0	0				
10	4995.43	16,920	-39	20	0	0	0				
11	4995.38	16,881	-39	20	0	0	0				
12	4995.37	16,873	-8	20	0	0	0				
13	4995.32	16,834	-39	20	0	0	0				
14	4995.27	16,795	-39	20	0	0	0				
15	4995.22	16,755	-40	20	0	0	0				
16	4995.18	16,727	-28	20	0	0	0				
17	4995.17	16,716	-11	20	0	0	0				
18	4995.12	16,677	-39	20	0	0	0				
19	4995.11	16,670	-7	20	0	0	0				
20	4995.01	16,592	-78	20	0	0	0				
21	4995.07	16,638	46	20	0	0	0				
22	4995.02	16,599	-39	20	0	0	0				
23	4994.99	16,576	-23	20	0	0	0				
24	4994.92	16,522	-54	20	0	0	0				
25	4994.89	16,499	-23	20	0	0	0				
26	4994.85	16,468	-31	20	0	0	0				
27	4994.81	16,437	-31	20	0	0	0				
28	4994.77	16,406	-31	20	0	0	0				
29	4994.73	16,375	-31	20	0	0	0				
30	4994.73	16,375	0	20	0	0	0				
Total cfs-days				---	600	0	0	63	663	201	
Total ac-ft				-917	1,190	0	0	0	125	1,315	
398											

1/ Values not available on a daily basis.

Table 2. Frenchman Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 55,477 ac-ft

November 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow 1/	
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/	Total Outflow 1/		
				Stream-flow Maint.	Water Supply Contract	Water Right					
Oct 31	5578.88	42,204									
1	5578.83	42,137	-67	0	6	0	0	0			
2	5578.84	42,150	13	0	6	0	0	0			
3	5578.84	42,150	0	0	6	0	0	0			
4	5578.81	42,110	-40	0	6	0	0	0			
5	5578.81	42,110	0	0	6	0	0	0			
6	5578.77	42,057	-53	0	6	0	0	0			
7	5578.77	42,057	0	0	6	0	0	0			
8	5578.79	42,084	27	0	6	0	0	0			
9	5578.78	42,070	-14	0	6	0	0	0			
10	5578.77	42,057	-13	0	6	0	0	0			
11	5578.77	42,057	0	0	6	0	0	0			
12	5578.76	42,044	-13	0	6	0	0	0			
13	5578.75	42,030	-14	0	6	0	0	0			
14	5578.76	42,044	14	0	6	0	0	0			
15	5578.75	42,030	-14	2	2	0	0	0			
16	5578.75	42,030	0	2	0	0	0	0			
17	5578.75	42,030	0	2	0	0	0	0			
18	5578.73	42,004	-26	2	0	0	0	0			
19	5578.77	42,057	53	2	0	0	0	0			
20	5578.75	42,030	-27	2	0	0	0	0			
21	5578.76	42,044	14	2	0	0	0	0			
22	5578.76	42,044	0	2	0	0	0	0			
23	5578.75	42,030	-14	2	0	0	0	0			
24	5578.74	42,017	-13	2	0	0	0	0			
25	5578.75	42,030	13	2	0	0	0	0			
26	5578.77	42,057	27	2	0	0	0	0			
27	5578.77	42,057	0	2	0	0	0	0			
28	5578.76	42,044	-13	2	0	0	0	0			
29	5578.76	42,044	0	2	0	0	0	0			
30	5578.80	42,097	53	2	0	0	0	0			
Total cfs-days				---	32	86	0	0	107	225	171
Total ac-ft				-107	63	171	0	0	213	447	340

1/ Values not available on a daily basis.

Table 3. Lake Davis

Daily Operation

(in acre-feet except as noted)

Capacity: 84,371 ac-ft

November 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow 1/	
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/	Total Outflow 1/		
				Stream-flow Maint.	Water Supply Contract	Water Right					
Oct 31	5767.63	57,491									
1	5767.61	57,426	-65	23	0	0	0				
2	5767.61	57,426	0	23	0	0	0				
3	5767.60	57,394	-32	23	0	0	0				
4	5767.58	57,328	-66	23	0	0	0				
5	5767.56	57,263	-65	23	0	0	0				
6	5767.53	57,165	-98	23	0	0	0				
7	5767.50	57,068	-97	23	0	0	0				
8	5767.49	57,036	-32	23	0	0	0				
9	5767.48	57,003	-33	23	0	0	0				
10	5767.45	56,906	-97	23	0	0	0				
11	5767.45	56,906	0	23	0	0	0				
12	5767.43	56,841	-65	23	0	0	0				
13	5767.42	56,809	-32	23	0	0	0				
14	5767.40	56,744	-65	23	0	0	0				
15	5767.40	56,744	0	23	0	0	0				
16	5767.38	56,679	-65	23	0	0	0				
17	5767.37	56,647	-32	23	0	0	0				
18	5767.35	56,582	-65	23	0	0	0				
19	5767.34	56,550	-32	23	0	0	0				
20	5767.36	56,615	65	23	0	0	0				
21	5767.35	56,582	-33	23	0	0	0				
22	5767.32	56,485	-97	23	0	0	0				
23	5767.31	56,453	-32	23	0	0	0				
24	5767.30	56,421	-32	23	0	0	0				
25	5767.29	56,388	-33	23	0	0	0				
26	5767.26	56,292	-96	23	0	0	0				
27	5767.26	56,292	0	23	0	0	0				
28	5767.24	56,227	-65	23	0	0	0				
29	5767.16	55,970	-257	23	0	0	0				
30	5767.23	56,195	225	23	0	0	0				
Total cfs-days				---	690	0	0	0	261	951	298
Total ac-ft				-1,296	1,369	0	0	0	518	1,887	591

1/ Values not available on a daily basis.

Table 4. Lake Oroville

Daily Operation

(in acre-feet except as noted)

Capacity: 3,537,580 ac-ft

November 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow					Inflow	
				Hyatt Powerplant Generation 1/	Palermo Canal	Evaporation 2/	Spill	Total Outflow	Hyatt Powerplant Pumpback	Computed Inflow 3/
Oct 31	808.99	2,294,809								
1	808.88	2,293,528	-1,281	8,417	20	125	0	8,562	160	7,121
2	808.96	2,294,460	932	6,393	20	117	0	6,530	1,000	6,462
3	809.18	2,297,024	2,564	4,419	20	138	0	4,577	0	7,141
4	809.19	2,297,140	116	6,490	20	104	0	6,614	0	6,730
5	809.13	2,296,441	-699	6,669	20	104	0	6,793	0	6,094
6	808.87	2,293,412	-3,029	7,004	20	112	0	7,136	0	4,107
7	810.13	2,308,116	14,704	11	20	60	0	91	7,367	7,428
8	810.09	2,307,649	-467	9,739	14	95	0	9,848	505	8,876
9	809.70	2,303,091	-4,558	11,563	10	0	0	11,573	0	7,015
10	809.25	2,297,840	-5,251	12,787	10	43	0	12,840	0	7,589
11	808.30	2,286,781	-11,059	15,324	10	0	0	15,334	0	4,275
12	807.44	2,276,802	-9,979	16,610	10	69	0	16,689	0	6,710
13	806.99	2,271,593	-5,209	9,791	10	94	0	9,895	0	4,686
14	807.02	2,271,940	347	5,458	9	111	0	5,578	0	5,925
15	806.74	2,268,702	-3,238	10,447	8	34	0	10,489	0	7,251
16	806.62	2,267,316	-1,386	9,182	6	86	0	9,274	0	7,888
17	806.87	2,270,205	2,889	4,997	6	26	0	5,029	0	7,918
18	807.07	2,272,519	2,314	4,981	6	26	0	5,013	0	7,327
19	807.21	2,274,139	1,620	7,572	6	43	0	7,621	0	9,241
20	807.39	2,276,223	2,084	8,557	6	26	0	8,589	0	10,673
21	808.05	2,283,877	7,654	302	6	95	0	403	0	8,057
22	807.65	2,279,236	-4,641	10,082	6	43	0	10,131	0	5,490
23	807.83	2,281,324	2,088	5,381	6	52	0	5,439	0	7,527
24	807.63	2,279,004	-2,320	8,479	6	52	0	8,537	0	6,217
25	808.12	2,284,690	5,686	0	6	26	0	32	0	5,718
26	807.66	2,279,352	-5,338	9,186	6	43	0	9,235	0	3,897
27	808.03	2,283,645	4,293	1,232	6	26	0	1,264	0	5,557
28	808.65	2,290,851	7,206	0	6	34	0	40	938	6,308
29	808.41	2,288,060	-2,791	9,449	5	17	0	9,471	0	6,680
30	808.39	2,287,827	-233	9,444	5	26	0	9,475	0	9,242
Total		-6,982	219,966	309	1,827	0	222,102	9,970	205,150	

1/ Includes bypass flows

2/ Evaporation will be zero for days when there is precipitation or heavy overcast.

3/ Does not include pumpback.

**Table 5. Thermalito Forebay
Including Diversion Pool and Power Canal**

Daily Operation

(in acre-feet except as noted)

November 1999

Capacity: 25,120 ac-ft

Date	Storage 1/	Storage Change	Inflow			Outflow					Losses (-) And Gains (+)
			Lake Oroville Releases 2/	Kelly Ridge Generation	Thermalito Pumping- Generating Plant Pumpback	Thermalito Pumping- Generating Plant Generation 3/	Butte County	Thermalito Irrigation District	Releases To River 4/	Hyatt Powerplant Pumpback	
Oct 31	24,310										
1	23,245	-1,065	8,417	500	0	8,780	0	3	1,257	160	218
2	23,501	256	6,393	504	1,646	6,113	0	3	1,243	1,000	72
3	23,353	-148	4,419	569	0	3,882	0	3	1,251	0	0
4	23,378	25	6,490	432	0	5,822	0	3	1,247	0	175
5	23,418	40	6,669	510	0	5,982	0	3	1,247	0	93
6	24,879	1,461	7,004	518	0	4,914	0	3	1,257	0	113
7	23,134	-1,745	11	488	6,266	0	0	3	1,263	7,367	123
8	23,073	-61	9,739	498	784	9,617	0	3	1,263	505	306
9	22,825	-248	11,563	609	0	11,217	0	3	1,263	0	63
10	23,246	421	12,787	409	0	11,788	0	3	1,263	0	279
11	22,844	-402	15,324	377	0	14,987	0	3	1,261	0	148
12	22,751	-93	16,610	218	0	15,755	0	4	1,261	0	99
13	24,423	1,672	9,791	132	0	7,365	0	4	1,257	0	375
14	23,519	-904	5,458	371	0	5,586	0	4	1,263	0	120
15	23,066	-453	10,447	313	0	10,195	0	4	1,261	0	247
16	23,051	-15	9,182	411	0	8,581	0	4	1,261	0	238
17	23,772	721	4,997	401	0	3,555	0	4	1,267	0	149
18	23,569	-203	4,981	377	0	4,251	1	4	1,273	0	-32
19	24,135	566	7,572	381	0	6,540	1	4	1,275	0	433
20	23,534	-601	8,557	504	0	8,562	1	4	1,267	0	172
21	23,028	-506	302	498	0	0	1	4	1,269	0	-32
22	23,829	801	10,082	405	0	8,498	1	4	1,275	0	92
23	23,622	-207	5,381	470	0	4,958	1	4	1,275	0	180
24	24,508	886	8,479	468	0	6,716	1	4	1,277	0	-63
25	23,408	-1,100	0	163	0	0	1	4	1,275	0	17
26	23,010	-398	9,186	186	0	8,820	1	4	1,271	0	326
27	23,024	14	1,232	190	0	211	1	4	1,269	0	77
28	23,154	130	0	190	2,274	0	1	4	1,271	938	-120
29	23,410	256	9,449	188	0	8,430	1	4	1,267	0	321
30	23,254	-156	9,444	190	0	8,800	1	4	1,269	0	284
Total		-1,056	219,966	11,470	10,970	199,925	13	109	37,918	9,970	4,473

1/ Sum of Thermalito Forebay and Diversion Pool.

2/ Sum of releases from Lake Oroville through Hyatt plant, spill, and spillway leakage.

3/ Includes Bypass flows at Thermalito.

4/ The sum of the flows from fish barrier dam and the fish hatchery.

Table 6. Thermalito Afterbay

Daily Operation

(in acre-feet except as noted)

Capacity: 57,040 ac-ft

November 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow		Outflow					Losses (-) and Gains (+)	Total Releases to River 2/	
				Thermalito Pumping-Generating Plant Generation 1/	Sutter Butte Canal	Western Canal Lateral	Richvale Canal	Western Canal	Afterbay River Outlet	Thermalito Pumping-Generating Plant Pumpback			
Oct 31	131.98	39,047											
1	132.60	41,334	2,287	8,780	1,181	0	385	1,385	3,667	0	125	4,924	
2	132.03	39,229	-2,105	6,113	1,313	0	484	1,357	3,667	1,646	249	4,910	
3	131.22	36,326	-2,903	3,882	1,353	0	633	1,335	3,667	0	203	4,918	
4	130.85	35,035	-1,291	5,822	1,410	0	682	1,335	3,649	0	-37	4,896	
5	130.57	34,072	-963	5,982	1,408	0	714	1,363	3,667	0	207	4,914	
6	129.97	32,052	-2,020	4,914	1,375	0	732	1,384	3,648	0	205	4,905	
7	125.71	19,404	-12,648	0	1,361	0	730	1,382	3,648	6,266	739	4,911	
8	126.25	20,843	1,439	9,617	1,369	0	732	1,450	3,648	784	-195	4,911	
9	127.74	25,057	4,214	11,217	1,355	0	734	1,440	3,648	0	174	4,911	
10	129.25	29,704	4,647	11,788	1,281	0	752	1,363	3,648	0	-97	4,911	
11	131.61	37,711	8,007	14,987	1,250	0	738	1,327	3,669	0	4	4,930	
12	134.00	46,721	9,010	15,755	1,222	0	722	1,265	3,648	0	112	4,909	
13	134.13	47,234	513	7,365	1,204	0	722	1,228	3,648	0	-50	4,905	
14	133.89	46,286	-948	5,586	1,210	0	720	1,226	3,648	0	270	4,911	
15	134.76	49,761	3,475	10,195	1,202	4	722	1,226	3,669	0	103	4,930	
16	135.24	51,726	1,965	8,581	1,148	6	668	1,202	3,650	0	58	4,911	
17	134.51	48,751	-2,975	3,555	1,097	8	642	1,166	3,650	0	33	4,917	
18	134.04	46,878	-1,873	4,251	1,073	4	642	1,055	3,669	0	319	4,942	
19	134.20	47,512	634	6,540	1,069	0	644	893	3,669	0	369	4,944	
20	134.84	50,086	2,574	8,562	1,071	0	642	829	3,669	0	223	4,936	
21	133.32	44,066	-6,020	0	1,059	0	642	829	3,669	0	179	4,938	
22	133.94	46,484	2,418	8,498	1,067	18	642	778	3,669	0	94	4,944	
23	133.68	45,463	-1,021	4,958	1,065	38	611	670	3,669	0	74	4,944	
24	133.91	46,365	902	6,716	1,059	40	593	633	3,669	0	180	4,946	
25	132.44	40,738	-5,627	0	1,022	34	593	633	3,669	0	324	4,944	
26	133.21	43,644	2,906	8,820	1,027	34	593	631	3,669	0	40	4,940	
27	131.74	38,178	-5,466	211	1,022	34	593	631	3,669	0	272	4,938	
28	129.44	30,316	-7,862	0	1,023	34	591	631	3,650	2,274	341	4,921	
29	130.26	33,021	2,705	8,430	1,027	34	593	696	3,650	0	275	4,917	
30	131.19	36,221	3,200	8,800	1,027	36	609	807	3,471	0	350	4,740	
Total				-2,826	199,925	35,350	324	19,500	32,150	109,600	10,970	5,143	147,518

1/ Includes Bypass flows at Thermalito.

2/ The sum of the flows from the fish barrier dam, fish hatchery, and afterbay river outlet.

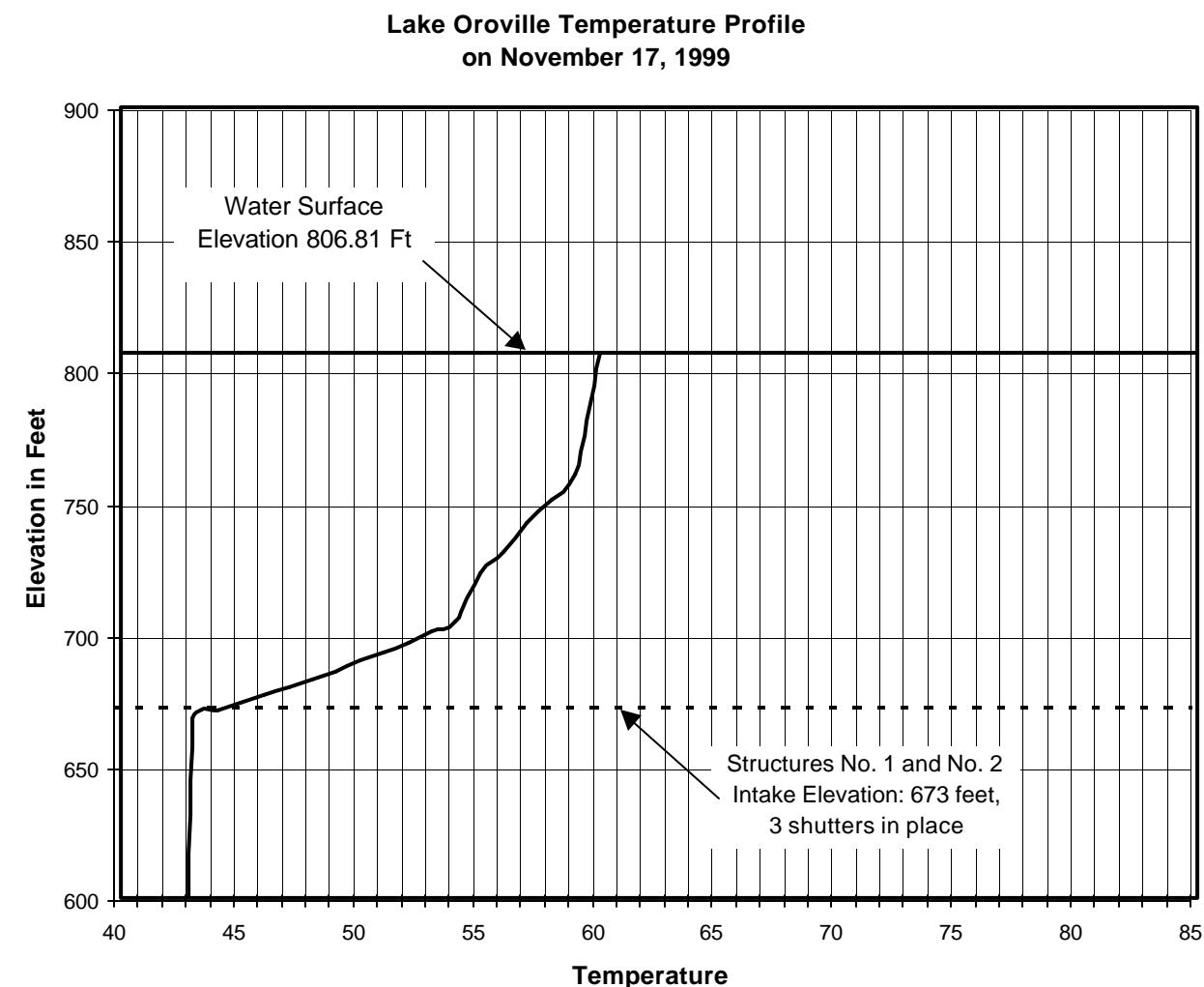
Table 7. Oroville-Thermalito Complex

Water Temperature Data

(in degrees Fahrenheit)

November 1999

Date	Mean Daily Temperature	
	Thermalito Afterbay Outlet	Fish Hatchery
1	54	52
2	55	52
3	55	51
4	55	50
5	55	50
6	56	50
7	56	50
8	56	51
9	55	50
10	54	50
11	53	50
12	53	50
13	52	51
14	52	50
15	52	51
16	52	51
17	52	51
18	52	51
19	51	51
20	51	50
21	51	51
22	50	51
23	50	51
24	50	51
25	50	51
26	50	51
27	50	51
28	50	51
29	50	51
30	49	51



Note: Water surface elevations on Table 4 are taken at Oroville Dam at midnight and may differ slightly from those shown on this table which are normally taken at mid-day and upstream from Oroville Dam.

Table 8. North Bay Aqueduct Delta Field Division, Monthly Deliveries

(In acre-feet)

November 1999

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries			
	Beginning and Ending				Entitlement		Exchange	
	No.	Structure	Mile		M & I	Benicia		
1	1	Barker Slough Pumping Plant	0.17	(Into the North Bay Aqueduct)	3,588			
		Travis Surge Tank	8.78					
			8.80	Solano County Water Agency Travis Turnout	179	179		
2			10.54	Solano County Water Agency Fairfield / Vacaville	619	619		
3A		Cordelia Forebay	21.23					
		Cordelia Pumping Plant & Cordelia Spillway	21.30		2,525			
	21.33			Solano County Water Agency Vallejo	792		792	
				Solano County Water Agency Benicia	880	880		
3B	2	Cordelia Surge Tank	23.33	Napa Pipeline				
		Creston Surge Tank Connection	25.65	Napa Pipeline				
			26.95	Napa County Flood Control & WCD American Canyon 2	11	11		
			27.27	Napa County Flood Control & WCD American Canyon 3	0			
		Napa Terminal Tank	27.58	City of Napa	720	720		
			27.60	Napa County Flood Control & WCD American Canyon 1	122	122		

Table 9. Delta Field Division Plant Data

(in acre-feet)

November 1999

Date	North Bay Aqueduct		California Aqueduct		South Bay Aqueduct			
	Barker Slough Pumping Plant	Cordelia Pumping Plant	Banks Pumping Plant		South Bay Pumping Plant	Del Valle Pumping Plant		Gravity Flow Through Plant Into Aqueduct
			Total	SWP		Into Lake	Into Aqueduct	
1	139	66	5,866	5,139	185	0	0	227
2	128	62	6,745	6,018	193	0	0	225
3	174	81	9,033	8,306	225	0	0	223
4	152	77	8,984	8,257	176	0	0	225
5	217	119	7,764	7,037	199	0	0	222
6	215	122	7,457	6,730	180	0	0	223
7	189	111	7,119	5,907	145	0	0	223
8	165	99	8,381	7,926	153	0	0	222
9	165	105	9,350	8,895	138	0	0	223
10	143	93	11,376	10,921	154	0	0	220
11	150	91	9,571	9,116	112	0	0	222
12	153	94	9,778	9,323	154	0	0	187
13	128	88	11,299	10,844	214	0	0	159
14	110	87	10,623	9,411	186	0	0	157
15	54	45	9,690	9,235	203	0	0	156
16	39	33	6,754	6,350	210	0	0	155
17	33	28	11,575	11,575	203	0	0	154
18	36	32	11,460	11,460	212	0	0	153
19	41	40	11,452	11,452	204	0	0	152
20	52	47	12,343	12,343	224	0	0	126
21	48	43	12,056	12,056	294	0	0	70
22	98	89	11,988	11,988	322	0	0	19
23	102	92	12,222	12,222	337	0	0	0
24	127	111	12,702	12,702	337	0	0	0
25	118	106	12,706	12,706	337	0	0	0
26	118	108	12,674	12,674	329	0	0	0
27	133	120	12,746	12,746	324	0	0	0
28	134	124	12,710	12,710	326	0	0	0
29	115	106	12,455	12,455	348	0	0	0
30	112	106	11,913	11,913	339	0	0	0
Total	3,588	2,525	310,792	300,417	6,963	0	0	3,937

Table 10. Clifton Court Forebay

Daily Operation of Gates

November 1999

Table 11. Governor Edmund G. Brown California Aqueduct

Delta Field Division, Monthly Deliveries

(In acre-feet)

November 1999

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries					
	Beginning and Ending				Entitlement	USBR	Misc.	Loan Water	Carryover Ent.	
	No.	Structure	Mile							
2A	1	Banks Pumping Plant	3.32		310,792	42	12	0	0	
	1	South Bay Pumping Plant	4.49	Bethany Reservoir Inlet	6,963					
		Check No. 1	5.95							
	2	Check No. 2	12.01							
	3		12.47	Musco Olive	42					
		Check No. 3	18.29							
	4		22.16	Tracy Golf & Country Club	12					
		Check No. 4	23.99							
	5	Check No. 5	29.73							
	6	Check No. 6	34.24							
	7		35.22	Turlock Fruit Company Inflow	0					
		Check No. 7	39.91							
2B	8		42.46	Oak Flat Water District-A	0	0	8	0	0	
			43.81	Oak Flat Water District-B	8					
			44.64	Oak Flat Water District-C	0					
			45.97							
	9		46.18	Oak Flat Water District-D	0	0	8	0	0	
				Oak Flat Totals:	8					
		Check No. 9	51.30							
	10	Check No. 10	56.86							
	11	Check No. 11	61.40							
	12		66.14	Veteran's Cemetery	2	2		0	0	
			66.71		288,454					

Table 12. South Bay Aqueduct

Delta Field Division, Monthly Deliveries

(In acre-feet)

November 1999

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries				
	Beginning and Ending				Entitlement	General Wheeling	Local	Recreation	
	No.	Structure	Mile						
1	1	South Bay Pumping Plant	0.00	(into South Bay Aqueduct)	6,963	6	332		
			3.17	Granite - Vasco Rd. (Temp.)	0				
			3.18	Oakland Scavenger Zone 7	6				
	2	Check No. 1	3.91						
		Check No. 2	5.21						
2	3		7.21	Zone 7 Altamont	5	5	332		
		Check No. 3	9.49	Zone 7 Patterson Stored Exchange	0	0			
				Zone 7 Patterson Project Water	332				
4	4	Check No. 4	10.68				875		
	5	Check No. 5	12.29						
	6		13.55	Zone 7 Wente #1	74	74			
			14.16	Zone 7 Wente #2	7	7			
		Check No. 6	14.65						
	7		14.78	Zone 7 Arroyo Mocho	875				
		Check No. 7	16.38						
			16.57	Zone 7 Wente #3	1	1			
5	8		16.69	Zone 7 Norman Nursery	0	0	8		
			16.70	Zone 7 Concannon Project Water	20	20			
		Del Valle Branch Pipeline Junction	18.63	(Pumped into Lake Del Valle)	0				
				(Flow into South Bay Aqueduct)	3,937				
		Deliveries through Del Valle Branch Pipeline		Arroyo Valle #1 & #2 Project Water	0	0			
				Arroyo Valle #1 & #2 Stored Exchange	0	0			
				Lake Del Valle Recreation	8				
				Zone 7 Wente #5	22	22			
6			19.20	So. Livermore Project	1,358	1,358	156		
				So. Livermore Inflow Released	156	0			
				So. Livermore Stored Exchanged	0				
			19.21	Zone 7 - Kalthrof Detjens	79	79			
7		La Costa Tunnel	22.50	ACWD Vallecitos Project Water	164	164			
			25.97	City of San Francisco San Antonio	0	0			
		Mission Tunnel	28.97	ACWD - Bayside 1 & 2 Project Water:	676	676			
8				Inflow Released	0	0			
				Stored Exchange:	0	0			
9		Santa Clara Pipeline	35.86	S.C.V.W.D. Meter	7,115	7,115			

Table 13. Lake Del Valle

Daily Operation

(in acre-feet except as noted)

November 1999

Capacity: 77,106 ac-ft

Date	Water Surface Elevation (feet)	Storage	Storage Change	Inflow		Outflow					Precipitation (inches)
				Natural 1/ 3/	From South Bay Aqueduct	Arroyo Valle	South Bay Aqueduct	Recreation Deliveries 2/ 3/	Evaporation	Total Outflow 3/	
Oct 31	689.76	31,237									
1	689.37	31,003	-234		0	0	227		8		0.00
2	689.00	30,782	-221		0	0	225		4		0.00
3	688.64	30,568	-214		0	0	223		4		0.00
4	688.26	30,343	-225		0	0	225		6		0.00
5	687.87	30,114	-229		0	0	222		6		0.00
6	687.50	29,898	-216		0	0	223		4		0.00
7	687.16	29,700	-198		0	0	223		2		0.00
8	686.79	29,486	-214		0	0	222		4		0.62
9	686.40	29,262	-224		0	0	223		4		0.00
10	686.01	29,039	-223		0	0	220		5		0.00
11	685.63	28,824	-215		0	0	222		7		0.00
12	685.31	28,643	-181		0	0	187		5		0.00
13	685.04	28,491	-152		0	0	159		5		0.00
14	684.77	28,340	-151		0	0	157		0		0.00
15	684.49	28,184	-156		0	0	156		4		0.06
16	684.23	28,040	-144		0	0	155		3		0.00
17	683.97	27,896	-144		0	0	154		3		0.11
18	683.70	27,748	-148		0	0	153		3		0.11
19	683.44	27,606	-142		0	0	152		4		0.11
20	683.22	27,486	-120		0	0	126		3		0.11
21	683.10	27,420	-66		0	0	70		1		0.08
22	683.06	27,399	-21		0	0	19		3		0.06
23	683.04	27,388	-11		0	0	0		2		0.00
24	683.02	27,377	-11		0	0	0		3		0.00
25	682.99	27,361	-16		0	0	0		5		0.00
26	682.97	27,350	-11		0	0	0		5		0.00
27	682.96	27,345	-5		0	0	0		5		0.00
28	682.94	27,334	-11		0	0	0		5		0.00
29	682.91	27,318	-16		0	0	0		2		0.00
30	682.94	27,334	16		0	0	0		0		0.17
Total		-3,903	156	0	0	3,937	8	114	4,059	1.43	

1/ Total inflow from stream gaging station above Lang Canyon and accretions/depletions.

2/ To East Bay Regional Park District.

3/ Not available on a daily basis.

NR=No Records

Table 14. Consolidated State-Federal O'Neill Forebay

Daily Operations

November 1999

United States
Department of the Interior
Bureau of Reclamation
Central Valley Project

State of California
The Resources Agency
Department of Water Resources
State Water Project

Capacity: 56,430 Acre-feet

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)				Outflow (cfs)				Computed Losses (-) Gains (+) (cfs)	
				Pump In 1/	O'Neill Pumping Generating Plant (Pumped)	Gianelli Pumping Generating Plant (Generation)	California Aqueduct	O'Neill Pumping Generating Plant (Generation)	Gianelli Pumping Generating Plant (Pumped)	Dos Amigos Pumping Plant 2/	Deliv- erries 3/		
Oct 31	219.67	42,299											
1	220.10	43,411	1,112	0	2,696	1,502	2,599	0	2,164	4,183	7	118	
2	220.12	43,463	52	0	2,746	508	3,303	0	2,160	4,312	4	-55	
3	221.63	47,414	3,951	0	2,901	1,231	3,952	0	2,162	4,092	4	166	
4	222.05	48,517	1,103	0	2,859	0	4,282	0	2,170	4,559	3	147	
5	222.53	49,793	1,276	0	2,872	0	3,398	0	2,170	3,454	3	0	
6	222.42	49,501	-292	0	2,903	0	3,572	0	2,347	4,381	2	108	
7	222.11	48,677	-824	0	2,846	1,160	3,441	0	4,300	3,624	2	64	
8	221.33	46,626	-2,051	0	2,921	0	3,894	0	4,290	3,719	5	165	
9	221.17	46,206	-420	0	2,944	0	4,513	0	4,280	3,522	3	136	
10	221.54	47,178	972	0	3,004	0	5,191	0	4,274	3,660	1	230	
11	221.42	46,863	-315	0	3,063	0	4,309	0	4,260	3,362	2	93	
12	222.13	48,730	1,867	0	3,124	0	5,153	0	4,260	3,376	2	302	
13	222.59	49,953	1,223	0	3,178	0	5,071	0	4,260	3,592	2	222	
14	223.36	52,009	2,056	0	3,291	0	4,881	0	4,256	3,032	3	156	
15	222.57	49,900	-2,109	0	3,368	0	4,661	0	6,278	2,880	5	71	
16	221.15	46,154	-3,746	0	3,285	0	2,970	0	5,108	3,069	2	35	
17	222.93	50,859	4,705	0	3,214	0	5,459	0	3,922	2,381	3	5	
18	222.14	48,756	-2,103	0	3,144	0	5,430	0	7,122	2,774	2	264	
19	221.89	48,098	-658	0	3,125	0	5,658	0	6,979	2,577	2	443	
20	223.37	52,035	3,937	0	3,134	0	5,777	0	4,558	2,732	2	366	
21	218.66	39,724	-12,311	0	3,236	0	5,792	0	12,293	3,148	2	208	
22	219.53	41,939	2,215	0	3,300	0	5,534	0	5,531	2,386	2	202	
23	220.70	44,975	3,036	0	3,423	0	5,792	0	5,233	2,600	2	151	
24	222.06	48,544	3,569	0	3,430	0	5,675	0	4,453	3,227	2	376	
25	220.43	44,270	-4,274	0	3,631	0	6,272	0	8,526	3,580	2	50	
26	221.47	46,994	2,724	0	3,691	0	5,824	0	5,245	3,209	2	314	
27	222.47	49,634	2,640	0	3,620	0	5,861	0	5,245	3,266	2	363	
28	218.12	38,370	-11,264	0	3,573	0	6,040	0	12,419	3,162	2	291	
29	220.07	43,334	4,964	0	3,554	0	5,771	0	3,884	3,270	5	337	
30	220.49	44,427	1,093	0	3,619	0	5,352	0	5,663	3,099	2	344	
Total				2,128	0	95,695	4,401	145,427	0	149,812	100,228	82	5,672
Mean cfs				---	0	3,190	147	4,848	0	4,994	3,341	3	189
Acre-feet				2,128	0	189,813	8,729	288,454	0	297,150	198,799	163	11,244

1/ Pump-in located at Mile 79.67R.

2/ CVC transfer incorporated in D.A. pumping; Total CVC transfer for November = 10,375 AF.

3/ Includes 72 AF delivered to DFG at O'Neill Forebay.

Table 15. Consolidated State-Federal San Luis Reservoir

Daily Operations

November 1999

United States

Department of the Interior

Bureau of Reclamation

Central Valley Project

Capacity: 2,027,835 ac-ft

State of California

The Resources Agency

Department of Water Resources

State Water Project

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)		Outflow (cfs)			Computed Losses (-) Gains (+) (cfs)
				Gianelli Pumping Generating Plant (Pumped)	Gianelli Pumping Generating Plant (Generation)	Pacheco Tunnel 1/	Parks and Rec. Del.		
Oct 31	432.20	801,279							
1	432.33	802,486	1,207	2,164	1,502	79	0	26	
2	432.67	805,648	3,162	2,160	508	82	0	24	
3	432.87	807,510	1,862	2,162	1,231	72	0	80	
4	433.28	811,331	3,821	2,170	0	80	0	-164	
5	433.72	815,439	4,108	2,170	0	83	0	-16	
6	434.17	819,647	4,208	2,347	0	87	0	-138	
7	434.82	825,739	6,092	4,300	1,160	85	0	16	
8	435.69	833,917	8,178	4,290	0	85	0	-82	
9	436.53	841,838	7,921	4,280	0	86	0	-201	
10	437.37	849,785	7,947	4,274	0	83	0	-184	
11	438.22	857,853	8,068	4,260	0	63	0	-129	
12	439.06	865,851	7,998	4,260	0	48	0	-180	
13	439.90	873,874	8,023	4,260	0	50	0	-165	
14	440.75	882,017	8,143	4,256	0	44	0	-107	
15	441.99	893,944	11,927	6,278	0	44	0	-221	
16	443.02	903,891	9,947	5,108	0	53	0	-40	
17	443.76	911,061	7,170	3,922	0	55	0	-252	
18	445.13	924,385	13,324	7,122	0	50	0	-355	
19	446.47	937,479	13,094	6,979	0	47	0	-331	
20	447.36	946,211	8,732	4,558	0	45	0	-111	
21	449.72	969,494	23,283	12,293	0	44	0	-511	
22	450.77	979,914	10,420	5,531	0	46	0	-232	
23	451.74	989,573	9,659	5,233	0	45	0	-318	
24	452.56	997,763	8,190	4,453	0	44	0	-280	
25	454.18	1,014,008	16,245	8,526	0	44	0	-292	
26	455.10	1,023,273	9,265	5,245	0	45	0	-529	
27	456.04	1,032,767	9,494	5,245	0	44	0	-415	
28	458.37	1,056,426	23,659	12,419	0	44	0	-447	
29	459.06	1,063,466	7,040	3,884	0	44	0	-291	
30	460.08	1,073,901	10,435	5,663	0	74	0	-328	
Total		272,622		149,812	4,401	1,795	0	-6,173	
Mean cfs		---		4,994	147	60	0	-206	
Acre-feet		272,622		297,150	8,729	3,563	0	-12,236	

1/ Pacheco Tunnel, San Felipe Split; Santa Clara: 3,301 AF, San Benito: 262 AF.

Table 16. San Luis Field Division Plant Data

(in acre-feet)

November 1999

Date	Dos Amigos Pumping Plant		Gianelli Pumping - Generating Plant				San Felipe Project
	Total Pumping	SWP Pumping 1/, 2/	Total Generation	SWP Generation 1/, 2/	Total Pumping	SWP Pumping 1/, 2/	Federal
1	8,296	7,202	2,979	2,979	4,292	-30	156
2	8,552	7,446	1,007	1,007	4,284	-31	163
3	8,116	6,997	2,442	2,442	4,288	-36	142
4	9,042	7,927	0	0	4,304	-38	159
5	6,852	5,759	0	0	4,304	-39	0
6	8,689	7,565	0	0	4,656	-53	173
7	7,189	5,622	2,301	2,301	8,529	-99	168
8	7,376	6,534	0	0	8,509	4,199	169
9	6,986	6,142	0	0	8,489	-109	171
10	7,259	6,415	0	0	8,478	4,271	165
11	6,668	5,820	0	0	8,450	4,167	124
12	6,696	5,847	0	0	8,450	4,170	96
13	7,125	6,274	0	0	8,450	4,255	99
14	6,014	4,445	0	0	8,441	64	88
15	5,713	4,861	0	0	12,453	4,284	88
16	6,088	5,238	0	0	10,131	5,979	105
17	4,723	3,866	0	0	7,779	2,981	109
18	5,502	4,554	0	0	14,127	6,614	99
19	5,111	4,163	0	0	13,843	9,325	93
20	5,418	4,479	0	0	9,041	6,032	90
21	6,245	5,720	0	0	24,383	12,468	87
22	4,732	3,868	0	0	10,970	6,536	91
23	5,157	4,255	0	0	10,379	5,959	89
24	6,400	5,886	0	0	8,833	4,419	88
25	7,101	6,605	0	0	16,912	4,714	87
26	6,365	5,862	0	0	10,403	5,960	90
27	6,479	5,956	0	0	10,403	5,969	88
28	6,272	5,755	0	0	24,633	12,987	87
29	6,487	5,973	0	0	7,703	3,334	88
30	6,146	5,635	0	0	11,233	6,875	146
Total	198,799	172,671	8,729	8,729	297,150	125,127	3,398

1/ Negative values may appear in SWP columns and indicate a mismatch of scheduled CVP energy and actual pumping;
adjustments to SWP water shares are made to balance the mismatch.

2/ Provisional, subject to change.

Table 17. Consolidated State-Federal Los Banos Reservoir

Daily Operations

November 1999

United States
Department of the Interior
Bureau of Reclamation
Central Valley Project

State of California
The Resources Agency
Department of Water Resources
State Water Project

Capacity: 34,560 ac-ft

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Estimated Inflow (cfs)	Estimated Outflow (cfs)		Computed Losses (-) Gains (+) (ac-ft)
					Spill	Outlet	
Oct 31	326.20	19,832					
1	326.19	19,827	-5	0	0	0	-5
2	326.19	19,827	0	0	0	0	0
3	326.18	19,823	-4	0	0	0	-4
4	326.18	19,823	0	0	0	0	0
5	326.17	19,818	-5	0	0	0	-5
6	326.16	19,813	-5	0	0	0	-5
7	326.15	19,809	-4	0	0	0	-4
8	326.15	19,809	0	0	0	0	0
1/ 9	326.15	19,809	0	0	0	0.5	1
10	326.14	19,804	-5	0	0	0	-5
11	326.14	19,804	0	0	0	0	0
12	326.14	19,804	0	0	0	0	0
13	326.14	19,804	0	0	0	0	0
14	326.13	19,800	-4	0	0	0	-4
15	326.14	19,804	4	2	0	0	0
16	326.13	19,800	-4	0	0	0	-4
17	326.12	19,795	-5	0	0	0	-5
18	326.12	19,795	0	0	0	0	0
19	326.12	19,795	0	0	0	0	0
20	326.12	19,795	0	0	0	0	0
21	326.09	19,781	-14	0	0	0	-14
22	326.09	19,781	0	0	0	0	0
23	326.08	19,777	-4	0	0	0	-4
24	326.08	19,777	0	0	0	0	0
25	326.08	19,777	0	0	0	0	0
26	326.09	19,781	4	2	0	0	0
27	326.09	19,781	0	0	0	0	0
28	326.09	19,781	0	0	0	0	0
29	326.09	19,781	0	0	0	0	0
30	326.08	19,777	-4	0	0	0	-4
Total			-55	4	0	0.5	-62
Mean cfs			---	0	0	0	---
Acre-feet			-55	8	0	1	-62

1/ 11/9 - Exercised gates 1 and 2. Released 1 AF.

Table 18. Consolidated State-Federal Little Panoche Reservoir

Daily Operations

November 1999

United States

Department of the Interior

Bureau of Reclamation

Central Valley Project

Capacity: 5,580 ac-ft

State of California

The Resources Agency

Department of Water Resources

State Water Project

Date	Water Surface Elev. (in feet)	Storage (ac-ft) 1/	Storage Change (ac-ft) 1/	Computed Inflow (cfs)	Estimated Outflow (cfs)		Computed Losses (-) Gains (+) (ac-ft) 1/
					Spill	Outlet	
Oct 31	602.35	812		2	0	2	0
1	Not Observed			2	0	2	0
2	Not Observed			2	0	2	0
3	Not Observed			2	0	2	0
4	Not Observed			2	0	2	0
5	Not Observed			2	0	2	0
6	Not Observed			2	0	2	0
7	Not Observed			2	0	2	0
8	602.35	812	0	2	0	2	0
9	Not Observed			2	0	2	0
10	Not Observed			2	0	2	0
11	Not Observed			2	0	2	0
12	602.60	826	14	9	0	2	0
13	Not Observed			2	0	2	0
14	Not Observed			2	0	2	0
15	Not Observed			2	0	2	0
16	Not Observed			2	0	2	0
17	Not Observed			2	0	2	0
18	Not Observed			2	0	2	0
19	602.60	826	0	2	0	2	0
20	602.62	828	2	3	0	2	0
21	Not Observed			2	0	2	0
22	Not Observed			2	0	2	0
23	Not Observed			2	0	2	0
24	Not Observed			2	0	2	0
25	Not Observed			2	0	2	0
26	Not Observed			2	0	2	0
27	Not Observed			2	0	2	0
28	Not Observed			2	0	2	0
29	Not Observed			2	0	2	0
30	602.60	826	-2	1	0	2	0
Total			14	67	0	60	---
Mean cfs			---	2	0	2	---
Acre-feet			14	133	0	119	0

1/ Not available on a daily basis

Table 19a. Governor Edmund G. Brown California Aqueduct

San Luis Field Division, Monthly Deliveries

(In acre-feet)

November 1999

Reach No.	Operating Pool			Turnout	Total Diver- sions	Deliveries					
	Beginning and Ending					USBR	Transfer	DWR	USBR		
	No.	Structure	Mile					Recreation	Recreation		
2B	12	Check No. 12	66.71		288,454						
3	13	O'Neill Forebay		Department of Parks and Recreation	7			4	3		
		Outlet Check No. 13	70.85	Department of Fish & Game	72			39	33		
		70.91	Thru	San Luis Water District	91	91					
			85.08	(Floodwater Inflow)	0						
				Reach 3 Subtotal:	170		0	43	36		
		Dos Amigos Pumping Plant	86.73		198,799						
4	14	89.03	Thru	San Luis Water District	1,451	1,451					
			94.06								
			89.66	Thru	Pacheco Water District		103	103			
			89.67								
			89.68	Panoche Water District	4			4			
		89.70	City of Dos Palos		22	22					
			95.06								
			98.15	Thru	San Luis Water District						
			104.20								
			96.15	Thru	Panoche Water District			181			
	15	102.64	(Floodwater Inflow)		0	0					
			102.64	Broadview Water District	2			2			
			105.22	Thru	Westlands Water District			2,206			
		108.64	108.64		2,206						
			Check No.14								
			108.50								
		Pacheco Water District Total:		103	103	103	0	0	0		
		Broadview Water District Total:		2	2	22	0	0	0		
		City of Dos Palos Total:		22	22		0	0	0		
		SLWD Reach 4 Subtotal:		1,628	1,628		0	0	0		
		Panoche Water District Total:		185	185		0	0	0		
		SLWD Total:		1,628	1,628		0	0	0		
		Westlands WD Reach 4 Subtotal:		2,206	2,206		0	0	0		

Table 19b. Governor Edmund G. Brown California Aqueduct

San Luis Field Division, Monthly Deliveries (Continued)

(In acre-feet)

November 1999

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries								
	Beginning and Ending					USBR	Exchange	DWR	USBR					
	No.	Structure	Mile					Recreation	Recreation					
5	16	110.52	(Reverse flow, Kings River)	0	0	836	3/ 3,000	1						
			Thru	3,836										
			122.05	1										
		Check No. 16	122.07											
	17	124.18	Westlands Water District	1,730	1,230	1/ 500	1/ 2,000	3/ 2,000						
			Thru											
		132.74												
	Check No. 17	132.95			4,868	367	3/ 2,000							
	18	133.81	Westlands Water District	6,009										
			Thru											
			142.61											
		Pleasant Valley Pumping Plant	143.16	4,868										
			143.16	367										
	Check No. 18	143.23			8,943	7,500	0	0						
			Westlands WD Reach 5 Subtotal:	16,443										
6	19	145.26	Westlands Water District	5,293	3,418	1/ 500	3/ 1,375							
			Thru											
			151.19											
		Check No. 19	155.64											
			Westlands WD Reach 6 Subtotal:	5,293	3,418	1,875	0	0						
7	20	156.34	City of Huron	78		78	2/ 580							
			Westlands Water District	2,195										
			Thru											
		163.69												
	Check No. 20	164.69			188	2/ 500								
	21	164.79	City of Avenal	188										
		167.04	Westlands Water District	1,176										
		Thru												
	Check No. 21	171.67			173,385									
		172.40												
			Reach 7 Total:	3,637										
			Westlands WD Total:	23,938										
			City of Coalinga Total:	367										
			City of Huron Total:	78										
			City of Avenal Total:	188										
			Phase I Water Total:	0										
			Total San Luis Field Division Deliveries:	26,591	19,431	7,080	44	36						

1/ State water transferred to WWD includes 3,000 AF from Arvin Edison, 580 AF of KCWA Exchange, and 500 AF Nickel/Garces/KCWA.

2/ KCWA entitlement delivered to WWD in accordance to letter of request dated 8/11/99.

3/ State CVC water transferred to WWD includes 3,455 AF Kern Tulare, 1,134 AF Rag Gulch, and 4,340 AF Lower Tule River ID.

Table 20. Consolidated State-Federal San Luis Canal 1/

Daily Operations
November 1999

United States
Department of the Interior
Bureau of Reclamation
Central Valley Project

State of California
The Resources Agency
Department of Water Resources
State Water Project

Date	Storage In Canal (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)		Outflow (cfs)				Computed Losses (-) Gains (+) (cfs)
			Non- Project 2/	Dos Amigos Pumping Plant	San Luis Water Dist. 3/	Panoche Water District	Westlands Water Dist. 4/	Flow Past Check 21	
Oct 31	28,230								
1	28,151	-79	0	4,183	35	4	501	3,712	29
2	28,419	268	0	4,312	38	4	504	3,653	22
3	27,813	-606	0	4,092	37	4	500	3,719	-138
4	29,185	1,372	0	4,559	33	4	491	3,182	-158
5	28,076	-1,109	0	3,454	33	4	493	3,690	207
6	28,399	323	0	4,381	35	4	477	3,749	47
7	28,879	480	0	3,624	36	4	489	3,085	232
8	29,378	499	0	3,719	22	4	475	3,079	113
9	29,076	-302	0	3,522	34	4	501	3,272	137
10	29,445	369	0	3,660	29	4	504	2,898	-39
11	29,160	-285	0	3,362	29	3	488	3,095	109
12	28,929	-231	0	3,376	28	3	470	3,028	37
13	29,543	614	0	3,592	30	3	458	2,747	-45
14	29,201	-342	0	3,032	33	3	477	2,889	198
15	29,303	102	0	2,880	31	4	420	2,429	55
16	28,299	-1,004	0	3,069	23	4	451	3,224	126
17	28,130	-169	0	2,381	24	4	455	2,141	158
18	27,850	-280	0	2,774	23	4	480	2,413	5
19	27,758	-92	0	2,577	32	3	491	2,047	-50
20	28,004	246	0	2,732	22	2	504	2,109	29
21	27,984	-20	0	3,148	18	2	473	2,870	205
22	27,938	-46	0	2,386	16	2	437	2,046	92
23	27,479	-459	0	2,600	26	2	442	2,429	68
24	27,494	15	0	3,227	26	2	456	2,820	84
25	28,893	1,399	0	3,580	27	2	451	2,712	317
26	28,559	-334	0	3,209	31	2	445	3,016	117
27	28,328	-231	0	3,266	32	2	445	2,911	7
28	28,183	-145	0	3,162	29	2	448	2,927	171
29	28,466	283	0	3,270	17	2	435	2,768	95
30	28,404	-62	0	3,099	9	2	430	2,753	64
Total		174	0	100,228	838	93	14,091	87,414	2,296
Mean cfs		---	0	3,352	29	3	472	2,925	77
Acre-feet		174	0	198,799	1,662	185	27,949	173,385	4,556

1/ San Luis Canal includes Pools 14 through 21 of the California Aqueduct.

2/ Pump In of Non-Project Water (0 AF @ Lat.7L) and Flood Water (0 AF) is included in the gain or loss.

3/ Includes 102 AF AG & 1 AF M&I to Pacheco W.D. and 22 AF to the City of Dos Palos.

4/ Includes 78 AF to the City of Huron, 188 AF to the City of Avenal, 367 AF to the City of Coalinga, 0 AF Phase I Water @ Lat. 13R, 2 AF to Broadview W.D., and 1 AF to F&G @ WWD Lateral 4L.

Table 21. San Joaquin Field Division Plant Data

(in acre-feet)

November 1999

Date	Coastal Aqueduct					California Aqueduct			
	Las Perillas Pumping Plant	Badger Hill Pumping Plant	Devil's Den Pumping Plant	Bluestone Pumping Plant	Polonio Pass Pumping Plant	Buena Vista Pumping Plant	Teerink Pumping Plant	Chrisman Pumping Plant	Edmonston Pumping Plant
1	141	141	46	44	49	3,463	2,961	2,833	2,847
2	155	155	69	51	70	2,848	2,870	2,888	2,683
3	73	73	46	42	48	3,133	3,167	3,061	2,807
4	117	117	73	67	74	2,913	2,747	2,636	2,542
5	86	86	50	46	54	3,053	3,113	2,937	2,874
6	191	191	86	77	88	3,110	3,108	3,005	2,842
7	116	116	50	48	56	3,096	3,197	3,328	2,954
8	172	172	64	59	67	2,168	2,206	2,113	2,062
9	151	151	49	45	50	2,809	2,870	2,803	2,769
10	148	148	35	33	38	2,463	2,444	2,360	2,288
11	159	159	51	49	56	2,856	2,883	2,765	2,702
12	129	129	60	52	58	2,672	2,680	2,536	2,558
13	45	45	43	40	45	2,829	2,771	2,699	2,603
14	0	0	25	25	29	2,991	3,045	3,012	2,954
15	0	0	9	10	11	3,102	3,090	3,012	2,954
16	0	0	4	4	5	3,149	3,163	2,985	2,954
17	0	0	0	0	0	1,738	1,579	1,543	1,636
18	0	0	0	0	0	1,889	1,860	1,705	1,636
19	0	0	0	0	0	1,522	1,503	1,455	1,472
20	0	0	0	0	0	1,654	1,663	1,579	1,633
21	171	171	17	10	9	2,957	2,964	2,905	2,847
22	207	207	113	104	112	1,522	1,517	1,459	1,513
23	116	116	53	49	56	1,574	1,562	1,509	1,508
24	46	46	26	25	27	3,882	3,770	3,650	3,701
25	63	63	59	52	60	3,784	3,866	3,729	3,760
26	67	67	46	41	48	3,779	3,773	3,729	3,599
27	106	106	55	51	57	2,566	2,602	2,480	2,585
28	43	43	50	45	52	2,589	2,577	2,515	2,504
29	98	98	70	65	73	3,091	3,139	3,038	3,008
30	105	105	86	80	89	3,091	2,985	2,979	3,011
Total	2,705	2,705	1,335	1,214	1,381	82,293	81,675	79,248	77,806

Table 22a. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries

(In acre-feet)

November 1999

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries						
	Beginning and Ending		Structure			Entitle-ment	USBR	Purchase Pool A	Purchase Pool B	Exchange 1/		
	No.	Mile										
7	21	Check No. 21	172.40		173,385							
8C	22		172.66	Empire West Side Irrig. Dist.		248	248	121	12,571	5,000		
				TL - A	248							
				County of Kings								
				TL - A	400							
			175.18	TLBWSD TL-A	12,571	32	36	36	15,173	5,000		
				DRWD - 1	121							
				DRWD - 1B	68							
				TLBWSD - C	0							
				DRWD - 1A	0							
				DRWD - 2	236							
8D			183.00	Tulare Lake Basin WSD	20,173	236	34	34	15,173	5,000		
				TL - B								
31A			184.63	Coastal Branch	2,705							
8D			184.78	Dudley Ridge Water Dist.		0	0	423	36	0		
				DRWD - 3	34							
9	23		189.69	Dudley Ridge Reach 8D Total:	459	813	17	0	27,744	5,000		
				Kern County Water Agency								
				Lost Hills Water Dist. - 1	813							
				Kern County Water Agency								
				Lost Hills Water Dist. - 2	17							
				Kern County Water Agency								
				Lost Hills Water Dist. - 3	0							
10A	24		191.18	Kern County Water Agency		7	7	0	0	0		
				Berrenda Mesa - 2	0							
				Kern County Water Agency								
				Lost Hills Water Dist. - 4	7							
				K.C.W.A. Reach 9 Subtotal:	837							
			Check No. 23	197.05								
10A	25		201.24	Kern County Water Agency		106	106	0	235	5,000		
				Lost Hills Water Dist. - 7	106							
				Kern County Water Agency								
				Lost Hills Water Dist. - 5	73							
				Kern County Water Agency								
			204.69	Lost Hills Water Dist. - 6	0	4,243	1,444	0	0	0		
				Kern County Water Agency								
				Lost Hills Water Dist. - 8	0							
				Kern County Water Agency								
			Check No. 24	207.94								
			209.71	Kern County Water Agency		4,243	5,847	0	0	0		
				Belridge Water Storage Dist. - 1A	416							
				Kern National Wildlife Refuge								
				USBR BV-1B	0							
				Kern County Water Agency								
			209.78	Buena Vista WSD 1B	4,243							
				KCWA Semitropic WSD	1,444							
				KCWA Semitropic WSD Penstocks	5,847							
				USBR Total:	0							
				K.C.W.A. Reach 10A Subtotal:	12,129							

1/ KCWA exchange of Ag entitlement per agreement dated 7/20/99

Table 22b. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries (Continued)

(In acre-feet)

November 1999

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries						
	Beginning and Ending		Mile			Entitle-ment	Federal Wheeling	Purchase Pool A	Purchase Pool B	MWD Ent. 2/		
	No.	Structure										
11B	25		210.75	Kern County Water Agency Belridge - 2	0	1,606						
			214.11	Kern County Water Agency Belridge - 3	0							
			216.62	Kern County Water Agency Belridge - 4	0							
			217.13	Kern County Water Agency Belridge - 5	1,606							
				Kern County Water Agency Belridge - 5D	222							
		Check No. 25	217.79									
				K.C.W.A. Reach 11B Subtotal:	1,828	1,828	0	0	0	0		
12D	26		219.58	Kern County Water Agency Belridge - 6	0							
		Check No. 26	224.92									
12E	27		230.37	Kern County Water Agency Buena Vista - 6	0	19,515				4,292		
			Check No. 27	231.73								
			235.75	Kern County Water Agency Buena Vista - 2	0							
			238.04	Kern County WA CVC	32,773							
				DRWD CVC	0							
				Tulare Co.	0							
				Lower Tule River	0							
				Fresno Co.	0							
				Pixley ID	0							
	28		238.11	Hacienda DWR Wells	0							
				Check No. 28								
				1/ Arvin Edison Total:	0							
				Reach 12E Subtotal:	32,773	19,515	0	5,321	3,645	4,292		
13B	29		241.02	Kern River Intertie (inflow)	0	336						
			242.85	KCWA Buena Vista WSD - 7	0							
				KCWA Buena Vista WSD - 5	336							
			243.09	Kern County Water Agency Buena Vista - 3	3,092							
		Check No. 29	244.54	Buena Vista WSD	0							
	30		249.85	Kern County Water Agency Buena Vista - 4	0							
			250.99		82,293							
				K.C.W.A. Reach 13B Subtotal:	3,428	3,428	0	0	0	0		
			254.47	Kern County Water Agency West Kern - 2	0							
14A	31		256.11	Kern County Water Agency Wheeler Ridge-Maricopa - 2	0							

1/ Arvin Edison Contractors include Rag Gulch WD, Kern-Tulare WD, Fresno County, Hills Valley ID, Tri Valley WD, Tulare County, Lower Tule River ID, and Pixley ID.

2/ Arvin-Edison WSD is storing this water for MWD per agreement dated 12/29/97; amended and extended by DWR letter dated 4/13/99.

Table 22c. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries (Continued)

(In acre-feet)

November 1999

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries							
	Beginning and Ending					Entitlement	Inter-ruptible Ent.	MWD Ent. Exch.	Exchange	MWD Ent. 1/			
	No.	Structure	Mile										
14A	31	Check No. 31	256.14	Kern County Water Agency Wheeler Ridge-Maricopa - 3	220	220							
	32		258.61										
			260.44										
		Check No. 32	261.72										
				KCWA Reach 14A Subtotal:	313	313	0	0	0	0			
14B	33		264.42	Kern County Water Agency Wheeler Ridge-Maricopa - 5	477	477							
			266.91	Kern County Water Agency Wheeler Ridge-Maricopa - 6	107		107						
		Check No. 33	267.36										
	34		270.24	Kern County Water Agency Wheeler Ridge-Maricopa - 7	521	521							
			271.27										
				Reach 14B Total:	1,105	1,105	0	0	0	0			
14C	35		272.39	Kern County Water Agency Wheeler Ridge-Maricopa - 8	452	452							
			276.09	Kern County Water Agency Wheeler Ridge-Maricopa - 9	595		595						
				Reach 14C Total:	1,047								
15A	36	Teerink Pumping Plant	278.13		81,675	335							
			279.02	Kern County Water Agency Wheeler Ridge-Maricopa - 9A	335								
			280.06	Kern County Water Agency Wheeler Ridge-Maricopa - 10	898		898						
				Reach 15-A Total:	1,233								
		Chrisman Pumping Plant	280.36		79,248								
16A	37		282.06	Kern County Water Agency Wheeler Ridge-Maricopa - 11	0	3							
			283.95										
			285.01	Kern County Water Agency Wheeler Ridge-Maricopa - 12	0								
	38		286.39	Kern County Water Agency Wheeler Ridge-Maricopa - 13A	3								
			287.06	Kern County Water Agency Wheeler Ridge-Maricopa - 13	0								
	39	Check No. 38	287.09										
17E	40		287.62	Kern County Water Agency Wheeler Ridge-Maricopa - 13B	83	83							
			290.21										
			291.26	Kern County Water Agency Wheeler Ridge-Maricopa - 14	863		863						
			293.07	Kern County Water Agency Wheeler Ridge-Maricopa - 15	92								
				Kern County Water Agency Tehachapi Cummings CWD	1								
				K.C.W.A. Reach 16A Subtotal:	1,042	1,042	0	0	0	0			
	Edmonston Pumping Plant	293.45			77,806								

1/ Semitropic WSD is storing this water for MWD.

Table 23. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries (Coastal Branch)

(In acre-feet)

November 1999

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries					
	Beginning and Ending				Entitlement	Inter-ruptible Ent.	MWD Ent.	Purchase Pool A	Purchase Pool B	
	No.	Structure	Mile							
31A	C-1	Coastal Branch Control	0.02		2,705					
		Las Perillas Pumping Plant	1.16		2,705					
	C-2		3.79	Green Valley Water District	0					
		Badger Hill Pumping Plant	4.27		2,705					
	C-3	Coastal Check No. 3	7.21							
	C-4		9.34	Castaic Lake WA (Devil's Den WD #1)	0					
		Coastal Check No. 4	9.34							
	C-5	Coastal Check No. 5	12.20							
	C-6		13.30	Kern County Water Agency Berrenda Mesa - 3	0					
			14.83	Kern County Water Agency Berrenda Mesa - DD	0					
				Kern County Water Agency Berrenda Mesa - PO	1,349	1,349				
		Devil's Den Pumping Plant	14.86		1,335					
				K.C.W.A. Reach 31A Subtotal:	1,349	1,349	0	0	0	
				K.C.W.A. Total:	57,084	43,591	0	4,292	5,556	
33A	C-7	Bluestone Pumping Plant	19.05		1,214					
	C-8	Polonio Pass Pumping Plant	26.54		1,381					
	C-9	Tank Site 1	27.81	(CCWA) Polonio Pass Treatment Plant						
	C-10	Shandon T.O.	38.23	Santa Barbara County (CCWA)	1,081	1,081				
		Tank Site 2	58.63	Central Coast:	0					
34	C-11	Chorro Valley T.O.	69.31	San Luis Obispo County (CCWA)	273	273				
		Energy Dissipater	78.12							
		Lopez T.O.	85.86	SLOCFC & WCD	0					
35	C-12			CCWA Total:	1,354	1,354	0	0	0	
		Guadalupe T.O.	102.70	SBCFC & WCD	0					
		Santa Maria T.O.	107.43	SBCFC & WCD	0					
38		So. Cal. Water T.O.	109.20	SBCFC & WCD	0					
				SBCFC & WCD Total:	0	0	0	0	0	
		Tank Site 5	115.42							

1/ Arvin-Edison WSD is storing this water for MWD per agreement dated 12/29/97; amended and extended by DWR letter dated 4/13/99.

Table 24. Southern Field Division Plant Data

(in acre-feet)

November 1999

Date	West Branch					East Branch								Devil Canyon Powerplant Generation
	Oso Pumping Plant	Warne Powerplant		Castaic Powerplant		Alamo Powerplant			Pearblossom Pumping Plant	Mojave Siphon Powerplant				
		Generation	Leakage	Generation	Pumpback	Generation	Bypass Through Plant	Cottonwood Chute		Generation	Leakage	Bypass Flume		
1	2,581	2,845	0	6,060	1,248	0	0	206	2	0	24	0	1,300	
2	2,595	2,546	0	3,336	760	0	0	40	0	0	17	0	1,100	
3	2,579	2,430	0	5,468	1,425	0	21	190	0	0	14	0	848	
4	2,413	2,890	0	5,851	2,032	0	22	22	93	0	13	0	819	
5	2,850	2,307	0	2,583	941	0	19	5	162	0	15	0	922	
6	2,801	3,008	0	638	3,740	0	20	22	0	0	17	0	773	
7	2,892	1,884	0	3,845	2,452	0	20	44	0	0	16	0	744	
8	2,020	3,065	0	5,140	1,950	0	19	43	0	0	12	0	932	
9	2,619	3,024	0	4,632	609	0	21	117	0	0	12	0	1,040	
10	2,229	2,314	0	4,301	2,025	0	12	0	0	0	12	0	712	
11	2,634	2,471	0	6,133	2,783	0	12	0	0	0	13	0	499	
12	2,442	2,245	0	5,275	2,104	0	19	54	0	0	27	0	1,096	
13	2,573	2,264	0	3,300	1,049	0	19	42	0	0	12	0	1,225	
14	2,910	2,273	0	2,601	2,885	0	19	0	0	0	12	0	1,076	
15	2,972	3,073	0	6,123	2,742	0	20	0	0	0	12	0	1,487	
16	3,031	3,155	0	5,226	2,558	0	19	0	0	0	11	0	1,292	
17	1,576	2,785	0	3,415	2,518	0	19	38	0	0	13	0	1,397	
18	1,580	2,000	0	6,359	0	0	15	0	93	0	0	0	1,246	
19	1,386	1,238	0	6,749	855	0	0	0	93	269	0	0	1,543	
20	1,615	1,431	0	1,190	1,140	0	17	0	93	868	0	0	1,204	
21	1,546	245	0	71	1,833	1,200	0	0	0	614	0	0	1,266	
22	1,457	1,564	0	6,132	1,476	0	22	34	0	192	0	0	1,408	
23	1,448	2,194	0	3,823	1,314	0	20	11	2	198	0	0	972	
24	1,449	1,685	0	6,016	840	2,185	0	0	953	420	0	24	956	
25	1,497	943	0	285	2,692	2,291	0	0	2,221	1,118	0	0	850	
26	1,729	1,749	0	1,402	2,565	1,908	0	0	1,653	1,126	0	0	1,375	
27	1,299	1,801	0	802	3,968	1,198	0	0	1,260	1,518	0	0	1,316	
28	1,502	725	0	1,861	3,210	1,021	0	0	805	833	0	0	1,295	
29	1,492	1,674	0	6,091	1,712	1,507	0	0	1,398	1,304	0	0	1,744	
30	1,497	1,534	0	6,217	1,184	1,489	0	0	1,492	1,607	0	0	1,527	
Total	63,214	63,362	0	120,925	56,610	12,799	355	868	10,320	10,067	252	24	33,964	

Table 25. Pyramid Lake

Daily Operation

Capacity: 171,200 ac-ft

(in acre-feet except as noted)

November 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow			Outflow			Computed Losses (-) Gains (+)	
				Project		Natural	Project		Natural		
				Castaic Powerplant Pumpback	Warne Powerplant	Stream Flow	Castaic Powerplant Generation	Recreation Deliveries	To Piru Creek		
Oct 31	2573.62	164,308									
1	2571.93	162,183	-2,125	1,248	2,845	21	6,060	0	20	-159	
2	2571.82	162,045	-138	760	2,546	21	3,336	0	20	-109	
3	2570.47	160,362	-1,683	1,425	2,430	22	5,468	0	20	-72	
4	2569.63	159,320	-1,042	2,032	2,890	22	5,851	0	20	-115	
5	2570.06	159,852	532	941	2,307	22	2,583	0	20	-135	
6	2574.90	165,930	6,078	3,740	3,008	22	638	0	20	-34	
7	2575.24	166,362	432	2,452	1,884	23	3,845	0	20	-62	
8	2575.16	166,260	-102	1,950	3,065	27	5,140	0	18	14	
9	2574.33	165,206	-1,054	609	3,024	26	4,632	0	20	-61	
10	2574.29	165,156	-50	2,025	2,314	25	4,301	0	18	-95	
11	2573.53	164,194	-962	2,783	2,471	25	6,133	0	20	-88	
12	2572.76	163,224	-970	2,104	2,245	24	5,275	0	18	-50	
13	2572.73	163,187	-37	1,049	2,264	24	3,300	0	20	-54	
14	2574.66	165,625	2,438	2,885	2,273	24	2,601	0	18	-125	
15	2574.35	165,232	-393	2,742	3,073	24	6,123	0	20	-89	
16	2574.68	165,650	418	2,558	3,155	24	5,226	0	18	-75	
17	2576.04	167,383	1,733	2,518	2,785	24	3,415	0	20	-159	
18	2572.49	162,885	-4,498	0	2,000	25	6,359	0	18	-146	
19	2568.57	158,011	-4,874	855	1,238	25	6,749	0	20	-223	
20	2569.72	159,431	1,420	1,140	1,431	25	1,190	0	18	32	
21	2571.27	161,358	1,927	1,833	245	25	71	0	20	-85	
22	2568.60	158,048	-3,310	1,476	1,564	25	6,132	0	18	-225	
23	2568.22	157,581	-467	1,314	2,194	25	3,823	0	20	-157	
24	2565.06	153,751	-3,830	840	1,685	25	6,016	0	18	-346	
25	2567.92	157,212	3,461	2,692	943	25	285	0	20	106	
26	2570.24	160,076	2,864	2,565	1,749	26	1,402	0	17	-57	
27	2574.22	165,067	4,991	3,968	1,801	26	802	0	19	17	
28	2575.77	167,038	1,971	3,210	725	26	1,861	0	17	-112	
29	2573.62	164,308	-2,730	1,712	1,674	25	6,091	0	19	-31	
30	2570.64	160,573	-3,735	1,184	1,534	25	6,217	0	17	-244	
Total				-3,735	56,610	63,362	728	120,925	0	571	-2,939

Table 26. Elderberry Forebay

Daily Operation

(in acre-feet except as noted)

Capacity: 32,746 ac-ft

November 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow		Outflow			Computed Losses (-) Gains (+)	
				Castaic Powerplant Generation	Natural	Castaic Powerplant Pumpback	To Castaic Lake			
							Natural	Project		
Oct 31	1516.97	21,968								
1	1519.50	23,028	1,060	6,060	0	1,248	0	3,752	0	
2	1518.32	22,530	-498	3,336	0	760	0	3,075	1	
3	1522.93	24,505	1,975	5,468	0	1,425	0	2,068	0	
4	1523.94	24,947	442	5,851	0	2,032	0	3,378	1	
5	1521.15	23,733	-1,214	2,583	0	941	0	2,854	-2	
6	1507.25	18,141	-5,592	638	0	3,740	0	2,490	0	
7	1510.87	19,520	1,379	3,845	0	2,452	0	0	-14	
8	1509.99	19,180	-340	5,140	0	1,950	0	3,532	2	
9	1515.59	21,400	2,220	4,632	0	609	0	1,801	-2	
10	1511.46	19,750	-1,650	4,301	0	2,025	0	3,935	9	
11	1510.59	19,412	-338	6,133	0	2,783	0	3,688	0	
12	1518.32	22,530	3,118	5,275	0	2,104	0	0	-53	
13	1517.17	22,050	-480	3,300	0	1,049	0	2,730	-1	
14	1512.25	20,060	-1,990	2,601	0	2,885	0	1,707	1	
15	1513.47	20,544	484	6,123	0	2,742	0	2,896	-1	
16	1514.26	20,861	317	5,226	0	2,558	0	2,352	1	
17	1510.19	19,257	-1,604	3,415	0	2,518	0	2,501	0	
18	1515.87	21,515	2,258	6,359	0	0	0	4,102	1	
19	1520.26	23,351	1,836	6,749	0	855	0	4,056	-2	
20	1520.35	23,390	39	1,190	0	1,140	0	0	-11	
21	1516.06	21,593	-1,797	71	0	1,833	0	0	-35	
22	1527.05	26,332	4,739	6,132	0	1,476	0	0	83	
23	1525.25	25,526	-806	3,823	0	1,314	0	3,316	1	
24	1532.91	29,043	3,517	6,016	0	840	0	1,659	0	
25	1527.61	26,586	-2,457	285	0	2,692	0	0	-50	
26	1525.06	25,442	-1,144	1,402	0	2,565	0	0	19	
27	1511.53	19,778	-5,664	802	0	3,968	0	2,499	1	
28	1508.02	18,430	-1,348	1,861	0	3,210	0	0	1	
29	1513.53	20,568	2,138	6,091	0	1,712	0	2,241	0	
30	1522.55	24,339	3,771	6,217	0	1,184	0	1,262	0	
Total				2,371	120,925	0	56,610	0	61,894	-50

Table 27. Castaic Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 323,699 ac-ft

November 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow		Outflow		Computed Losses (-) Gains (+)	
				From Elderberry Forebay		Natural	Deliveries		
				Natural	Project				
Oct 31	1490.55	271,737							
1	1491.31	273,272	1,535	0	3,752	0	2,283	0	
2	1491.71	274,082	810	0	3,075	1	2,278	0	
3	1491.61	273,879	-203	0	2,068	1	2,285	0	
4	1492.12	274,913	1,034	0	3,378	1	2,351	0	
5	1492.40	275,482	569	0	2,854	1	2,277	0	
6	1492.61	275,909	427	0	2,490	1	2,111	0	
7	1491.57	273,798	-2,111	0	0	1	2,101	0	
8	1492.18	275,035	1,237	0	3,532	1	1,880	0	
9	1492.51	275,706	671	0	1,801	1	1,660	0	
10	1493.63	277,989	2,283	0	3,935	3	1,695	0	
11	1494.63	280,037	2,048	0	3,688	2	1,706	0	
12	1493.85	278,438	-1,599	0	0	2	1,546	0	
13	1494.44	279,647	1,209	0	2,730	2	1,575	0	
14	1494.53	279,831	184	0	1,707	2	1,546	0	
15	1495.16	281,126	1,295	0	2,896	2	1,546	0	
16	1495.55	281,929	803	0	2,352	2	1,559	0	
17	1495.92	282,692	763	0	2,501	2	1,435	0	
18	1497.40	285,756	3,064	0	4,102	2	1,339	0	
19	1498.75	288,568	2,812	0	4,056	2	1,345	0	
20	1498.12	287,254	-1,314	0	0	3	1,311	0	
21	1497.49	285,943	-1,311	0	0	3	1,269	0	
22	1496.79	284,491	-1,452	0	0	3	1,329	0	
23	1497.69	286,359	1,868	0	3,316	3	1,456	0	
24	1497.93	286,858	499	0	1,659	3	1,387	0	
25	1497.35	285,652	-1,206	0	0	3	1,259	0	
26	1496.69	284,283	-1,369	0	0	3	1,228	0	
27	1497.23	285,403	1,120	0	2,499	2	1,348	0	
28	1496.63	284,159	-1,244	0	0	2	1,272	0	
29	1497.10	285,133	974	0	2,241	2	1,269	0	
30	1497.16	285,258	125	0	1,262	2	1,238	0	
Total				13,521	0	61,894	58	48,884	
								453	

Table 28. Governor Edmund G. Brown California Aqueduct

Southern Field Division, Monthly Deliveries (West Branch)

(In acre-feet)

November 1999

Reach No.	Operating Pool		Turnout	Total Diver-sions	Deliveries					
	Beginning and Ending				Entitle-ment	Rec.	Local	Purchase Pool B	CLWA T1	
	No.	Structure	Mile							
29A	42	Oso Pumping Plant	1.49		63,214					
29F	W2	Quail Lake	5.02	Antelope Valley-East Kern Water Agency	Re-moved					
		Quail Lake Embankment	7.82	Antelope Valley-East Kern Water Agency	Stub					
		Warne Power Plant	14.07		63,362					
29H	W3	Pyramid Lake		Calif. State Park Pyramid Recreation	0					
		Pyramid Dam	17.10	Piru Creek Fish Enhancement	0					
29J	W4	Castaic Power Plant	25.82	(56,610 AF pumpback)	120,925					
		Elderberry Forebay								
		Forebay Dam	28.12							
		Castaic Lake		Calif. State Park Castaic Lake Recreation	20					
30 1/	W5	Castaic Dam	31.47							
		Castaic Lake Outlet	31.55	MWD - 78"	0					
				MWD - 132"	48,217					
				MWD-Castaic Lake WA - T1	-2,208					
				Castaic Lake WA - T1	2,208					
				Castaic Lake WA	493					
				United Water Conservation Dist.	0					
				MWD - Ventura County FCD	154					
				LA Co. Parks & Recreation	0					
				Releases to Lagoon	0					
				Reach 30 Subtotal:	48,884	48,864	20	0	0	
	W6	Castaic Lagoon		Recreation to Lagoon	97					
		Outlet	31.87		106					

1/ Reach 30 actually terminates at mile 31.50. It is shown here as including the outlet works at mile 31.55.

All deliveries from the outlet works and from the Lagoon are billed to Reach 30.

Table 29. Silverwood Lake

Daily Operation
(in acre-feet except as noted)

Capacity: 74,970 ac-ft

November 1999

Date	Water Surface Elev. (in feet)	Storage	Storage Change	Inflow			Outflow				Del. To Mojave W.A.	Natural To Mojave River	Computed Losses (-) Gains (+)	Las Flores Ranch Exchange 1/
				Mojave Siphon Power-plant	Mojave Bypass Flume	Natural Stream Inflow	Project	Delivered to CLAWA	Rec.	San Bernardino Tunnel				
Oct 31	3353.74	73,745												
1	3352.57	72,619	-1,126	24	0	0	6	0	1,300	1	0	157	0	
2	3351.51	71,606	-1,013	17	0	0	1	0	1,100	0	0	71	0	
3	3350.67	70,809	-797	14	0	0	0	0	848	0	0	37	0	
4	3349.73	69,922	-887	13	0	0	0	1	819	1	0	-79	0	
5	3348.80	69,052	-870	15	0	0	3	0	922	0	0	40	0	
6	3348.00	68,307	-745	17	0	0	5	0	773	0	0	16	0	
7	3347.30	67,660	-647	16	0	0	4	0	744	1	0	86	0	
8	3346.34	66,770	-890	12	0	0	4	0	932	0	0	34	0	
9	3345.21	65,745	-1,025	12	0	0	4	0	1,040	0	0	7	0	
10	3344.53	65,129	-616	12	0	0	3	1	712	1	0	89	0	
11	3343.99	64,641	-488	13	0	0	0	0	499	0	0	-2	0	
12	3342.85	63,619	-1,022	27	0	0	4	0	1,096	0	0	51	0	
13	3341.48	62,402	-1,217	12	0	0	0	0	1,225	1	0	-3	0	
14	3340.31	61,372	-1,030	12	0	0	0	1	1,076	0	0	35	0	
15	3338.70	59,970	-1,402	12	0	0	0	0	1,487	0	0	73	0	
16	3337.13	58,619	-1,351	11	0	0	0	0	1,292	1	0	-69	0	
17	3335.53	57,258	-1,361	13	0	0	0	0	1,397	0	0	23	0	
18	3334.10	56,056	-1,202	0	0	0	0	1	1,246	0	0	45	0	
19	3332.55	54,767	-1,289	269	0	0	0	0	1,543	1	0	-14	0	
20	3332.19	54,471	-296	868	0	0	1	0	1,204	0	0	41	0	
21	3331.65	54,028	-443	614	0	0	0	0	1,266	0	0	209	0	
22	3330.30	52,930	-1,098	192	0	0	0	0	1,408	1	0	119	0	
23	3329.29	52,116	-814	198	0	0	0	1	972	0	0	-39	0	
24	3328.76	51,691	-425	420	24	0	2	0	956	0	0	89	0	
25	3329.24	52,075	384	1,118	0	0	2	0	850	1	0	119	0	
26	3329.09	51,955	-120	1,126	0	0	2	0	1,375	0	0	131	0	
27	3329.38	52,188	233	1,518	0	0	3	0	1,316	0	0	34	0	
28	3328.79	51,715	-473	833	0	0	3	0	1,295	1	0	-7	0	
29	3328.18	51,229	-486	1,304	0	0	3	0	1,744	0	0	-43	0	
30	3328.29	51,316	87	1,607	0	0	3	0	1,527	1	0	11	0	
Total				-22,429	10,319	24	0	53	5	33,964	11	0	1,261	0

1/ Project water delivered from Mojave Siphon in exchange for like amount of Natural Streamflow.

Table 30. Lake Perris

Daily Operation

(in acre-feet except as noted)

Capacity: 131,452 ac-ft

November 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow 1/	Outflow 2/	Computed Losses (-) Gains (+) 1/
Oct 31	1586.65	123,760				
1	1586.61	123,669	-91		75	
2	1586.59	123,624	-45		11	
3	1586.58	123,601	-23		28	
4	1586.47	123,351	-250		277	
5	1586.29	122,944	-407		306	
6	1586.11	122,536	-408		306	
7	1585.97	122,220	-316		308	
8	1585.94	122,152	-68		369	
9	1585.86	121,971	-181		368	
10	1585.69	121,587	-384		369	
11	1585.55	121,272	-315		368	
12	1585.47	121,092	-180		98	
13	1585.44	121,024	-68		100	
14	1585.37	120,889	-135		110	
15	1585.32	120,754	-135		110	
16	1585.27	120,642	-112		66	
17	1585.26	120,619	-23		11	
18	1585.24	120,574	-45		11	
19	1585.23	120,552	-22		11	
20	1585.23	120,552	0		415	
21	1585.21	120,507	-45		11	
22	1585.19	120,462	-45		11	
23	1585.17	120,417	-45		11	
24	1585.16	120,394	-23		11	
25	1585.15	120,372	-22		10	
26	1585.16	120,394	22		11	
27	1585.16	120,394	0		11	
28	1585.16	120,394	0		11	
29	1585.16	120,394	0		10	
30	1585.16	120,394	0		11	
Total			-3,366	678	3,825	-219

1/ Readings are not taken on a daily basis. End of month only.

2/ Includes deliveries to MWD from Reach 28J and recreation water to California State Park at lake Perris.

Table 31a. Governor Edmund G. Brown California Aqueduct

Southern Field Division, Monthly Deliveries (East Branch)

(In acre-feet)

November 1999

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries								
	Beginning and Ending				Entitle-ment	Rec.	Transfer 1/	Purchase Pool B	Transfer Local Out				
	No.	Structure	Mile										
17E	40	Edmonston Pumping Plant	293.45										
	41		298.65	Kern County Water Agency Tej.-Cas									
17F		Check No. 41	303.41										
18A	42	Check No. 42	304.99										
19		Alamo Powerplant	305.73	(Does not include 868 AF flow down Cottonwood Chute)	13,154	8	745	54	0				
			308.05	Antelope Valley-East Kern WA									
	43	Check No. 43	309.70										
			311.84	LADWP Connection	0								
			313.50	AVEK 245th Street West									
	44	Check No. 44	314.81										
			314.93	AVEK 235th Street West	8								
			315.57	AVEK 225th Street West									
	45	Check No. 45	319.74										
			323.19	Antelope Valley-East Kern WA Fairmont	799								
		Check No. 46	323.84										
				Reach 19 Total:	807	753	0	54	0				
20A	47	Check No. 47	326.77			39	2/ 16 1,997	727	0				
			326.91	Antelope Valley-East Kern WA Willow Springs Siphon	39								
			329.65	Antelope Valley-East Kern WA 120th Street West									
		Check No. 48	330.82										
	49	Check No. 49	335.93										
			336.73	AVEK WA - Quartz Hill (Wheeled for Palmdale WD)	16								
				Antelope Valley-East Kern WA									
20B	50	Check No. 50	341.51										
		Check No. 51	342.07										
			342.80	Antelope Valley-East Kern WA 30th Street West	Not in Use								
			343.74										
			346.98	PWD Palmdale	727								
			348.14	Antelope Valley-East Kern WA Acton Treatment Plant									
		Check No. 53	348.17										
21	54	Check No. 54	350.25										
	55	Check No. 55	352.70										
	56	Check No. 56	354.76										
			354.97	Littlerock Creek I.D.	0								
	57	Check No. 57	356.93										
22A	58		357.60	Antelope Valley-East Kern WA	0	283	283	0	0				
			357.72	Antelope Valley-East Kern WA 96th Street East									
			359.82	Antelope Valley-East Kern WA East Side Treatment Plant									

1/ Mojave WA entitlement water transferred to AVEK.

2/ Billed to AVEK per agreement dated 8/17/84.

Table 31b. Governor Edmund G. Brown California Aqueduct

Southern Field Division, Monthly Deliveries (East Branch, Continued)

(In acre-feet)

November 1999

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries					
	Beginning and Ending				Entitlement	Recreation	Ex-change	Purchase Pool B	Local	
	No.	Structure	Mile							
22B	58	Pearblossom Pumping Plant	360.61		10,320					
	59	Check No. 59	366.09							
	60	Check No. 60	373.94							
	61	Check No. 61	379.00							
	62	Check No. 62	384.26							
	63	Check No. 63	389.20	Mojave Water Agency Mojave River	443		1/ 443			
	64	Check No. 64	395.10							
	65	Check No. 65	400.32							
	66		401.10	Mojave Water Agency Morongo 24" and 42"	539					
				Mojave Water Agency Hesperia	0		1/ 539			
23	Check No. 66	403.41								
24	Mojave Siphon	405.48		Las Flores Ranch	0					
	Mojave Siphon Powerplant	405.65		(Does not include 24 AF of bypass at Mojave Flume)	10,319					
	Silverwood Lake	407.65		Crestline Lake Arrowhead Water Agency	53	53				
				Calif. State Park						
	San Bernardino Tunnel	411.46		Silverwood Agency (Rec.)	5					
25										
26A	Devil Canyon Powerplant	412.73			33,964					
	Devil Canyon Afterbay Control Structures	412.88		MWD-SC Rialto	6,421	6,421				
				Desert Water Agency (MWD Wheeling Exchange)	6,301	3,444				
				San Gabriel Valley Water District	1,371	878	2/ 493	2,857		
				Coachella Valley WD (MWD Wheeling Exchange)	6,000	2,088				
				San Bernardino Valley Metropolitan Water District	1,617	1,617				
				MWD (SBVMWD Exchange)	0					
28G	Santa Ana Valley Pipeline	425.46								
28H		433.06		MWD-SC Box Springs	5,014	5,014				
		440.05		MWD-SC Perris Bypass Pipeline	7,249	7,249				
28J	Lake Perris	442.00		MWD-SC 18"	326	326				
		443.44		MWD-SC 54"	3,076	3,076				
				MWD-SC 78"	395	395				
				Calif. State Park						
				Lake Perris Recreation	28		28			
				MWD Total:	80,945	74,176	0	0	6,769	
0										

1/ Exchange water with Solano County WA.

2/ Dudley Ridge WD exchange. (The contract is not finalized at this time.)

Table 32. Water Quality At Selected SWP Locations

November 1999

Constituent	Units	Thermalito Afterbay At Outlet	North Bay Aqueduct Barker Slough Pumping Plant	Banks Pumping Plant	Delta Mendota Canal At McCabe Rd.	California Aqueduct				Devil Canyon Afterbay Near San Bernardino
						O'Neill Forebay Outlet (Check 13)	Kettleman City (Check 21)	Near Hwy 119 (Check 29)	Tehachapi Afterbay (Check 41)	
Alkalinity	mg/l	38	88	62	84	71	74	75	82	75
Arsenic	mg/l	<0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003
Boron	mg/l	<0.10	0.1	<0.10	0.2	0.1	0.2	0.2	0.2	0.1
Bromide	mg/l	<0.01	0.03	0.29	0.24	0.28	0.30	0.29	0.27	0.21
Calcium	mg/l	8	15	15	22	18	19	19	19	18
Carbon - Total Organic	mg/l	NR	13	2	3	3	2	NR	2	2
Chloride	mg/l	1	14	82	68	83	87	86	78	62
Chromium	mg/l	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.005
Copper	mg/l	<0.001	0.002	0.002	0.002	0.003	0.002	0.002	0.002	0.003
Fluoride	mg/l	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hardness	mg/l	32	83	83	104	94	97	97	97	90
Iron	mg/l	<0.005	<0.005	0.014	<0.005	0.009	<0.005	<0.005	<0.005	<0.005
Lead	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium	mg/l	3	11	11	12	12	12	12	12	11
Manganese	mg/l	<0.005	0.022	0.013	<0.005	0.007	<0.005	<0.005	<0.005	<0.005
Nitrate + Nitrite	mg/l	<0.01	0.29	0.42	NR	NR	NR	NR	0.73	0.39
Phosphorus-Ortho	mg/l	<0.01	0.06	0.04	NR	NR	NR	NR	0.04	0.06
Phosphorus-Total	mg/l	0.02	0.12	0.07	NR	NR	NR	NR	0.09	0.07
Selenium	mg/l	<0.001	<0.001	<0.001	0.001	0.001	0.001	0.001	<0.001	<0.001
Sodium	mg/l	3	18	51	52	54	57	57	54	44
Specific Conductance	µS/cm	79	255	447	487	483	513	497	490	418
Sulfate	mg/l	2	15	22	44	32	34	33	32	26
Total Dissolved Solids	mg/l	54	142	242	270	257	268	242	257	228
Trihalomethane	µg/l	NR	566	392	375	457	392	382	352	373
Formation Potential	NTU	2	30	16	NR	8	4	4	3	2
Turbidity	NTU	NR	566	392	375	457	392	382	352	373
Zinc	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	0

mg/l milligrams per liter

µg/l micrograms per liter

µS/cm microSiemens per centimeter

NR - Not Reported

NTU - nephelometric turbidity units

Table 33. Water Quality At Selected Delta Stations

November 1999

Date	Tides (feet above mean sea level)		Flow In CFS		Electrical Conductivity in milliSiemens/crr								Cl in mg/l		
			Net Delta Outflow Index		Rio Vista	Antioch	Chippis Island	Emmaton		Jersey Point		Clifton Court	Cache Slough	Delta Mendota Canal	
	(Antioch) Daily Mean		Mean Daily	Monthly Average											
	Hi	Half			md	md	md	md	14dm	md	14dm	md	md	md	
1	2.24	0.69	7,292	7,292	6,369	4.75	10.10	1.92	2.31	1.35	1.59	0.56	0.62	0.50	192
2	2.24	0.70	6,863	7,078	6,058	4.35	10.05	2.00	2.34	1.36	1.58	0.56	0.61	0.50	192
3	2.38	0.76	4,270	6,142	5,653	4.53	10.43	1.86	2.34	1.37	1.57	0.58	0.60	0.50	188
4	2.44	0.66	4,071	5,624	5,620	4.51	9.39	1.70	2.32	1.37	1.57	0.49	0.62	0.51	184
5	2.63	0.81	4,129	5,325	5,900	4.78	9.62	1.85	2.28	1.43	1.56	0.50	0.63	0.51	190
6	2.78	0.93	4,661	5,214	5,723	5.00	9.88	2.03	2.22	1.48	1.54	0.47	0.64	0.53	197
7	2.94	1.08	4,522	5,115	5,693	5.26	10.40	2.22	2.19	1.55	1.54	0.49	0.61	0.52	198
8	2.95	1.06	6,339	5,268	7,034	5.59	10.19	2.28	2.18	1.61	1.53	0.48	0.63	0.49	183
9	2.83	0.87	9,008	5,684	8,012	4.89	9.51	1.80	2.12	1.45	1.51	0.49	0.64	0.49	188
10	2.90	0.97	8,597	5,975	8,135	4.46	10.27	1.96	2.06	1.53	1.49	0.48	0.62	0.50	200
11	2.73	0.94	9,640	6,308	8,413	4.34	10.45	1.96	1.99	1.51	1.46	0.46	0.62	0.49	200
12	2.48	0.83	9,987	6,615	8,696	4.17	9.92	1.67	1.95	1.45	1.45	0.49	0.65	0.50	218
13	2.38	0.83	7,228	6,662	8,255	4.05	9.59	1.58	1.91	1.50	1.45	0.49	0.68	0.50	199
14	2.53	1.04	5,472	6,577	7,555	3.94	10.92	1.87	1.91	1.59	1.47	0.54	0.68	0.52	185
15	1.96	0.89	5,633	6,514	7,804	4.10	9.75	1.36	1.87	1.45	1.48	0.43	0.72	0.54	157
16	2.13	0.94	7,814	6,595	7,325	4.64	10.25	1.53	1.83	1.48	1.48	0.43	0.75	0.51	179
17	2.18	0.68	7,589	6,654	8,209	4.42	9.93	1.15	1.78	1.31	1.48	0.55	0.77	0.54	187
18	2.17	0.48	7,664	6,710	8,020	4.04	9.36	0.96	1.73	1.24	1.47	0.53	0.75	0.54	182
19	2.62	0.63	6,942	6,722	8,187	4.35	10.14	1.35	1.69	1.38	1.47	0.47	0.71	0.52	158
20	2.66	0.63	8,799	6,826	9,672	4.50	10.47	1.38	1.65	1.39	1.46	0.49	0.69	0.54	165
21	2.66	0.53	10,295	6,991	9,817	4.32	9.91	1.12	1.57	1.34	1.45	0.52	0.63	0.53	188
22	2.08	0.20	8,886	7,077	9,962	3.90	0.00	1.04	1.48	1.30	1.42	0.53	0.60	0.56	175
23	2.96	0.48	9,169	7,168	10,409	4.00	9.33	1.21	1.44	1.36	1.42	0.51	0.62	0.54	180
24	2.90	0.50	9,291	7,257	10,038	4.00	9.29	1.20	1.38	1.36	1.40	0.54	0.65	0.55	226
25	2.89	0.47	7,177	7,253	8,869	3.88	8.67	1.22	1.33	1.35	1.39	0.55	0.68	0.53	215
26	3.05	0.70	5,817	7,198	11,951	4.21	9.01	1.31	1.31	1.49	1.40	0.56	0.69	0.53	208
27	2.75	0.79	4,913	7,114	11,753	4.46	8.94	1.16	1.28	1.60	1.40	0.56	0.70	0.52	163
28	2.39	0.66	4,928	7,036	11,476	4.32	0.00	1.00	1.21	1.58	1.40	0.55	0.72	0.58	235
29	2.17	0.66	4,929	6,963	11,349	4.35	0.00	0.99	1.19	1.70	1.42	0.49	0.73	0.58	190
30	2.26	0.66	5,201	6,904	11,637	4.57	8.41	0.98	1.15	1.82	1.44	0.48	0.76	0.56	215

Clifton Court Cl(mg/l)=200X EC - 25

N.R. = No Record.

N.C. = Not computed due to insufficient data.

e = Estimated

dm = Daily Mean

md = Mean Daily

f = Excess Delta conditions with fish concerns.

r = Excess delta conditions with export/inflow ratio concerns.

s = Balanced water conditions with storage withdrawals.

Table 34. Pesticides, Herbicides, and Other Organic Substances Detected In the SWP

November 1999			
Sampling Location	Sample Date	Chemical Detected	Concentration µg/l
	1/		2/
North Bay Aqueduct At Barker Slough Pumping Plant	September 15, 1999	None Detected	- - -
California Aqueduct At Banks Pumping Plant	September 15, 1999	MTBE	1.0
Delta Mendota Canal At McCabe Road	September 15, 1999	None Detected	- - -
California Aqueduct Near Kettleman City (Check 21)	September 15, 1999	None Detected	- - -
California Aqueduct At Tehachapi Afterbay (Check 41)	September 15, 1999	None Detected	- - -
Devil Canyon Power Plant At Entrance To Santa Ana Pipeline	September 15, 1999	MTBE	2.4

1/ Locations are normally sampled during March, June, and September. Monthly reports will include data for the month in which samples were most recently taken.

2/ Micrograms per liter.

Table 35. Oroville and Delta Field Divisions Energy Data

(in kWh)

November 1999

Date	Oroville Thermalito Complex		Barker Slough Pumping Plant Load	Cordelia Pumping Plant Load	Banks Pumping Plant		South Bay Pumping Plant Load	Del Valle Pumping Plant Load
	Generation	Load			Total Load	SWP Load		
1	4,932,864	111,168	24,633	22,442	1,672,704	1,672,704	163,245	225
2	3,698,784	868,608	22,652	20,979	1,935,744	1,935,744	169,930	219
3	2,534,976	4,896	30,870	25,928	2,563,776	2,563,776	194,360	217
4	3,720,096	5,472	26,712	25,634	2,561,280	2,561,280	157,715	222
5	3,842,496	4,896	38,731	40,999	2,246,400	2,246,400	164,800	219
6	3,957,408	2,880	38,129	41,013	2,142,144	2,142,144	154,775	213
7	0	5,828,544	33,243	37,625	2,005,056	2,005,056	124,330	206
8	5,827,968	438,048	29,197	33,754	2,407,680	2,407,680	133,600	203
9	6,919,488	0	29,190	35,217	2,684,928	2,684,928	123,415	196
10	7,531,488	0	25,263	35,385	3,260,160	3,260,160	136,780	190
11	9,063,648	0	26,411	34,853	2,737,536	2,737,536	104,890	192
12	9,665,280	0	26,950	36,155	2,742,912	2,742,912	134,660	196
13	5,563,872	288	22,547	32,956	3,209,856	3,209,856	180,780	196
14	3,178,368	0	19,376	32,375	2,988,096	2,988,096	156,705	191
15	6,084,000	0	9,492	18,536	2,752,512	2,752,512	171,480	193
16	5,357,088	0	6,853	16,044	1,942,848	1,942,848	176,240	208
17	2,780,640	0	5,880	13,818	3,289,728	3,289,728	171,935	219
18	2,853,504	0	6,349	15,596	3,292,032	3,292,032	179,170	210
19	4,289,472	288	7,539	18,424	3,266,112	3,266,112	173,945	207
20	4,890,240	0	9,723	22,673	3,529,344	3,529,344	181,590	210
21	87,840	0	8,974	20,237	3,436,224	3,436,224	229,625	209
22	5,742,432	0	17,353	31,108	3,425,856	3,425,856	248,195	228
23	3,085,056	0	18,123	29,526	3,489,600	3,489,600	263,445	215
24	4,902,912	0	22,211	37,849	3,644,352	3,644,352	263,260	215
25	31,392	0	20,776	35,294	3,615,936	3,615,936	262,760	205
26	5,417,568	0	20,699	36,351	3,633,216	3,633,216	256,885	206
27	596,736	0	23,380	37,653	3,643,776	3,643,776	251,915	202
28	13,536	892,224	23,737	38,325	3,611,328	3,611,328	252,185	204
29	5,530,464	576	20,258	35,350	3,558,912	3,558,912	275,365	201
30	5,539,968	288	19,810	35,343	3,435,072	3,435,072	263,835	207
Total	127,639,584	8,158,176	635,061	897,442	88,725,120	88,725,120	5,721,815	6,224

Table 36. San Luis Field Division Energy Data

(in kWh)

November 1999

Date	Dos Amigos Pumping Plant		Gianelli Pumping-Generating Plant			
	Total Load	SWP Load 1/	Total Generation	SWP Generation 1/	Total Load	SWP Load 1/
1	1,188,576	1,134,576	546,048	546,048	1,167,840	-8,160
2	1,187,856	1,133,856	184,320	184,320	1,167,552	-8,448
3	1,089,792	1,035,792	393,120	393,120	1,166,112	-9,888
4	1,227,888	1,173,888	0	0	1,165,824	-10,176
5	983,088	929,088	0	0	1,165,536	-10,464
6	1,152,576	1,098,576	0	0	1,259,712	-14,288
7	986,688	938,688	424,800	424,800	2,325,024	-26,976
8	1,034,496	980,496	0	0	2,321,856	1,145,856
9	975,888	921,888	0	0	2,322,144	-29,856
10	1,013,328	959,328	0	0	2,321,280	1,169,280
11	921,744	867,744	0	0	2,320,128	1,144,128
12	921,888	867,888	0	0	2,321,568	1,145,568
13	975,888	921,888	0	0	2,320,416	1,168,416
14	819,936	771,936	0	0	2,321,568	17,568
15	781,488	727,488	0	0	3,439,296	1,183,296
16	837,504	783,504	0	0	2,810,592	1,658,592
17	694,512	568,512	0	0	2,209,536	850,536
18	731,232	605,232	0	0	3,920,544	1,835,544
19	679,392	553,392	0	0	3,861,792	2,601,792
20	727,344	601,344	0	0	2,533,824	1,693,824
21	856,800	784,800	0	0	6,876,000	3,516,000
22	690,336	564,336	0	0	3,121,632	1,861,632
23	720,720	594,720	0	0	2,968,704	1,708,704
24	895,680	823,680	0	0	2,532,384	1,272,384
25	1,030,464	958,464	0	0	4,791,456	1,335,456
26	910,368	838,368	0	0	2,959,200	1,699,200
27	891,216	819,216	0	0	2,964,960	1,704,960
28	873,936	801,936	0	0	7,106,976	3,746,976
29	909,504	837,504	0	0	2,232,864	972,864
30	865,152	793,152	0	0	3,256,128	1,996,128
Total	27,575,280	25,391,280	1,548,288	1,548,288	83,252,448	35,310,448

1/ Negative values may appear in SWP columns and indicate a mismatch of scheduled CVP energy and actual pumping;
adjustments to SWP water shares are made to balance the mismatch.

Table 37. San Joaquin Field Division Pumping Plant Energy Load Data

(in kWh)

November 1999

Date	Coastal Branch					California Aqueduct			
	Las Perillas	Badger Hill	Devils Den	Bluestone	Polonio	Buena Vista	Teerink	Chrisman	Edmonston
1	10,530	27,144	34,182	33,480	36,360	702,072	775,728	1,761,408	6,467,040
2	11,394	29,552	51,408	46,548	50,922	686,880	751,824	1,698,048	6,101,280
3	5,956	15,344	33,966	32,130	35,334	756,360	826,992	1,875,744	6,375,600
4	8,930	22,768	52,812	49,536	53,604	708,624	720,504	1,602,720	5,707,440
5	6,806	16,296	37,242	34,830	37,854	739,440	815,832	1,800,864	6,539,760
6	13,882	36,080	62,316	56,682	62,640	749,088	817,488	1,840,896	6,469,920
7	8,928	22,392	37,170	36,720	40,050	754,488	837,648	1,885,536	6,714,720
8	12,568	34,112	47,556	44,586	47,862	525,096	578,088	1,317,024	4,647,600
9	11,052	28,368	36,036	34,290	36,432	678,600	747,864	1,736,928	6,292,800
10	10,840	26,592	26,748	25,650	28,080	596,592	651,816	1,475,424	5,140,080
11	11,736	32,016	38,376	36,900	40,320	690,264	754,344	1,747,008	6,145,920
12	9,236	23,240	41,508	39,204	41,634	647,496	702,144	1,607,616	5,730,480
13	4,006	8,720	32,238	30,708	33,084	682,128	731,880	1,712,160	5,926,320
14	1,006	1,512	19,512	19,692	21,996	717,840	799,920	1,895,328	6,731,280
15	1,460	600	7,380	8,298	8,442	741,168	812,880	1,894,752	6,730,560
16	166	440	3,996	4,932	5,580	755,208	839,304	1,922,976	6,697,440
17	916	776	1,008	990	828	418,248	417,384	988,416	3,687,120
18	920	744	1,566	1,080	900	455,760	492,840	1,082,880	3,687,120
19	880	736	1,566	1,638	1,440	369,360	401,328	927,360	3,323,520
20	882	728	1,656	1,692	1,458	402,408	446,472	1,009,728	3,695,040
21	13,236	36,408	13,536	8,442	8,010	711,648	779,400	1,829,664	6,485,040
22	14,860	43,600	80,208	76,212	79,650	368,496	403,704	937,152	3,412,080
23	9,748	26,920	39,024	37,548	40,500	379,800	413,784	959,904	3,392,640
24	4,374	10,448	19,890	19,800	20,106	928,440	994,320	2,313,216	8,398,080
25	6,322	14,672	43,038	40,248	43,362	907,272	1,026,504	2,363,328	8,549,280
26	6,224	16,288	33,786	31,374	34,416	907,560	1,002,168	2,367,360	8,181,360
27	9,296	23,912	40,464	38,286	41,202	655,056	689,400	1,567,584	5,675,040
28	4,138	9,856	36,846	34,524	37,674	624,816	679,104	1,573,344	5,634,720
29	8,754	22,800	51,192	48,564	51,804	748,728	823,176	1,930,464	6,857,280
30	9,208	23,680	62,010	59,436	63,792	742,536	803,448	1,897,056	6,851,520
Total	218,254	556,744	988,236	934,020	1,005,336	19,751,472	21,537,288	49,521,888	176,248,080

Table 38. Southern Field Division Energy Data

(in kWh)

November 1999

Date	West Branch			East Branch			
	Oso Pumping Plant Load	Warne Powerplant Generation	Castaic Powerplant SWP Generation	Alamo Powerplant Generation	Pearblossom Pumping Plant Load	Devil Canyon Powerplant Generation	Mojave Siphon Powerplant Generation
1	696,864	1,654,560	2,760,000	0	15,660	1,598,112	42
2	699,048	1,492,776	2,760,000	0	15,048	1,352,064	0
3	696,304	1,448,280	2,760,000	0	15,048	1,035,072	0
4	667,800	1,667,160	2,760,000	0	76,284	994,752	0
5	754,712	1,385,064	2,760,000	0	122,640	1,146,624	0
6	741,496	1,744,920	2,760,000	0	13,740	935,424	0
7	788,928	1,147,248	2,760,000	0	14,232	911,136	0
8	519,568	1,763,136	2,760,000	0	15,000	1,142,688	0
9	706,944	1,747,080	2,760,000	0	15,204	1,254,528	0
10	594,720	1,326,096	2,760,000	0	14,856	870,336	0
11	713,664	1,445,760	2,760,000	0	14,244	589,152	0
12	657,048	1,282,896	2,760,000	0	14,700	1,221,984	0
13	680,120	1,314,504	2,760,000	0	14,412	1,458,528	0
14	779,296	1,358,856	2,760,000	0	14,808	1,332,000	0
15	791,616	1,762,200	2,760,000	0	14,340	1,730,496	0
16	802,928	1,809,216	2,760,000	0	14,424	1,541,568	0
17	414,680	1,601,352	1,584,000	0	15,348	1,690,368	0
18	428,288	1,167,552	1,584,000	0	77,892	1,488,288	0
19	384,552	778,824	1,584,000	0	77,148	1,832,736	17,010
20	427,336	830,448	1,584,000	0	76,584	1,446,528	60,858
21	430,192	136,296	1,584,000	142,156	15,420	1,572,768	39,879
22	398,272	924,048	1,440,000	140	16,260	1,674,912	11,298
23	385,504	1,314,504	1,440,000	0	16,656	1,171,104	12,033
24	396,480	975,816	1,440,000	267,848	656,268	1,125,408	26,649
25	408,800	589,608	1,440,000	281,120	1,506,396	1,041,408	112,539
26	475,272	1,009,152	1,440,000	230,524	1,127,772	1,657,248	115,269
27	351,288	1,034,352	1,440,000	143,808	861,900	1,591,296	150,381
28	397,488	451,224	1,440,000	117,768	561,924	1,562,592	60,375
29	401,856	1,038,096	1,440,000	183,008	948,804	2,076,576	122,640
30	401,072	954,720	1,440,000	180,964	1,016,676	1,822,464	163,212
Total	16,992,136	37,155,744	65,040,000	1,547,336	7,379,688	40,868,160	892,185